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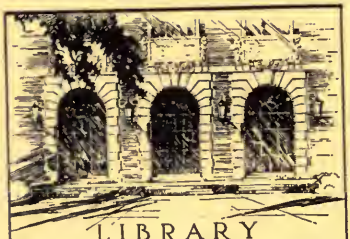

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USEFUL PLANTS AND DRUGS OF IRAN AND IRAQ

BY

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WELLCOME HISTORICAL MEDICAL MUSEUM, LONDON

WITH NOTES BY

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PREFACE

During 1934 as leader of the Field Museum Anthropological Expedition to the Near East, in addition to about 10,000 herbarium specimens from Trans-Jordan, Palestine, Syria, Iraq, and Iran, I collected a number of useful plants and drugs in Iran and Iraq.

The late Dr. Berthold Laufer, then Curator of Anthropology, had requested me to make this collection and to obtain such information as could be had regarding their use in the treatment of diseases and in prescriptions for various ailments.

In Iran specimens were purchased in the native markets of Tehran and Isfahan. In each case the Persian name with its English transliteration and the use of the drug or herb was recorded. While guests of Dr. Erich Schmidt at Rayy during September, 1934, we obtained specimens in Tehran. Dr. Walter P. Kennedy of the Royal College of Medicine in Baghdad and Mr. George Miles, member of the archaeological expedition staff at Rayy, assisted in this work.

At Isfahan Mirza Muhammad Ali Khan, ninety-five-year-old doctor, very kindly consented to dictate his prescriptions (pp. 200–216) for various ailments. He began to practice medicine at the age of twenty after spending about five years in a local school. His father, several uncles, and his grandfather were medical practitioners using the oral tradition and two large handwritten volumes of prescriptions, which I examined at his home in the depths of the labyrinthine Ghetto. At Isfahan the dictation in Persian was recorded by Juda Rabbi Hedvat of the Alliance Israélite.

The translation was prepared in part by Dr. A. H. Mookree and by Dr. A. H. K. Sassani, Iran Government scholar at the University of Chicago. Dr. H. W. Bailey of the School of Oriental Studies, University of London, revised the Persian characters and the transliterations.

The assistance of Mr. Paul C. Standley, Associate Curator of Botany in Field Museum, who checked the botanical names in the text, and of Miss Elizabeth Reniff in the preparation of the report is gratefully acknowledged.

Mr. A. R. Horwood of Kew Herbarium very kindly identified some of the specimens.

The spelling of place names conforms to the system adopted by the British Permanent Committee on Geographical Names, published in London by the Royal Geographical Society.

To conform to current practice Iran has been substituted for Persia and Irani for Persian except in historical references.

In Iraq Dr. Hydari, Director of the Rustam Agricultural Experimental Farm at Hinaidi near Baghdad, presented to Field Museum a number of varieties of *Gossypium*, *Hordeum*, and *Triticum*. Dr. Calvin K. Staudt, Director of the American School for Boys in Baghdad, contributed information regarding local drugs.

As a result of Dr. Laufer's death, arrangements had to be made for the study and publication of the material desired by him without the benefit of his collaboration. Other collections of drugs from southwestern Asia had been studied by Dr. David Hooper of the Wellcome Historical Medical Museum in London. I therefore visited him to discuss the question of the identification of the collections from Iran and Iraq. Dr. Hooper, who a few years previously had published an account of the drugs of Iran, consented to prepare a report on the Field Museum material and this publication is the result. To his account, I have in certain cases added some notes (H.F.) and, from sources indicated in each instance, mostly from Evan Guest, a mention of some of the more important useful plants not a part of the collection studied by Dr. Hooper. Dr. Casey A. Wood has published a translation of the "Tadhkirat" of Ali ibn Isa of Baghdad (circa A.D. 940–1010) under the title "Memorandum Book of a Tenth-Century Oculist," Chicago, 1936. This publication contains (pp. 47–78) a list of drugs and other remedial agents which can be compared with the data in this report.

Because of the difficulties involved in recording the colloquial names for the various plants and drugs and their transliterations, there are inevitably certain discrepancies, but I believe that the list of native names in alphabetical order with their Latin equivalents should be of value to other collectors. If the native name is not in the list, the reader should refer to tukhm (seeds), gul-i (flowers), gil-i (earth), or rishah (root), as the name may appear in these forms.

The useful plants and materia medica of southwestern Asia may be considered to be fairly well known and no new drug plants are included in the list, but it is hoped that this report will be of value in making existing information even more accessible and in encouraging medical officers to publish additional information.

The rapid advance of westernization in Iran under Reza Shah Pahlevi and in Iraq under King Ghazi necessitates the accurate recording of rapidly disappearing primitive medical folklore.

HENRY FIELD

USEFUL PLANTS AND DRUGS OF IRAN AND IRAQ

DAVID HOOPER

INTRODUCTION

The material embodied in the present catalogue is the result of three collections made in Iran and Iraq during the past eight years. The first was made by Henry Field, leader of the Field Museum Anthropological Expedition to the Near East, 1934. These specimens were obtained mostly from the bazaars of Tehran, Isfahan, and Baghdad, while some were gathered in fields and gardens where medicinal plants were cultivated. Lists accompanied these plants, stating their vernacular names and local properties and uses. The second collection was made in 1933 by Captain P. Johnston-Saint, of the Wellcome Historical Medical Museum in London; this consisted of 200 vegetable, animal, and mineral medicines from the markets of Putrus and Tehran.

The third collection was made by Dr. J. M. Cowan and Dr. C. D. Darlington in the spring of 1929 (*Kew Bulletin*, 1930, pp. 49–68). The drugs were all of vegetable origin and were found in the bazaars of Tehran, Hamadan, and Kermanshah.

The specimens of the first-named collection are specified in the catalogue under the name of "Field" followed by the number of the drug in the list. The numbers in the Field collection not followed by place names are from Tehran. Those followed by the letter A were obtained in Baghdad, Iraq. The specimens in the second collection are marked by "W.H.M.M." (Wellcome Historical Medical Museum) followed by the registered number. Those collected by Cowan and Darlington are distinguished by the letters "K.B." followed by a number referring to the page in the *Bulletin of Miscellaneous Information*, No. 6, Royal Botanic Gardens, Kew, 1931, pp. 299–344, where the drug is described.

An opportunity is thus given of studying crude drugs and comparing them with the names of those found in the ancient literature of Iran where materia medica has long been a special science. One of the first and most important of the Persian works on pharmacology is the "Kitabulabnyat an haqa 'iq-uladviyat," or "Book of the Foundations of the True Properties of the Remedies," written about A.D. 970 by the physician Abu Mansur, who during one of his journeys

visited India. B. Laufer ("Sino-Iranica," 1919) says, "This is not only the earliest Persian work on the subject but the oldest production in prose of the Neo-Persian literature. The text has been examined by R. Seligmann from a unique manuscript of Vienna dated 1055, the oldest extant Persian manuscript." There is a translation by Abdul-Chaliq Achundow from Baku. This has been rendered into German and published by Dr. R. Kobert in his "Historische: Die pharmacologischen Grundsätze des Abu Mansur Muwaffak, 1893." References to this work are noted under the name "Achundow."

In the year 1681 there was published in Paris the "Pharmacopoeia Persica, ex idiomate Persico in Latinum conversa, opus missionariis, mercatoribus, caeterisque Regionum Orientalium, Lustratoribus necessarium nec non Europaeis Nationibus perutile." This was written by a Carmelite monk, Frater Angelus. There is a short list of a few raw drugs, but the work contains chiefly prescriptions for pharmaceutical preparations, many of which are made up of fifteen to twenty ingredients.

A valuable work of more recent date is one published in Tehran in 1874. It was compiled by Professor J. L. Schlimmer, of the Polytechnic College of Persia, Chief Medical Officer to the Persian Army, and Sanitary Officer, Tehran. It is written in French, and entitled "Terminologie Médico-Pharmaceutique et Anthropologique Française-Persane." This contains a very full list of medicinal plants of Iran with identifications made by Boissier, de Candolle, Haussknecht, and other eminent European pharmacologists and botanists.

Dr. J. E. T. Aitchison has botanically explored portions of Iran and the neighboring regions, and his "Notes on the Products of Western Afghanistan and of North-Eastern Persia," published in Edinburgh in 1890, has been most useful for reference. Dr. William Dymock, for many years Medical Storekeeper for Bombay, had exceptional opportunities of studying the drugs coming into India from the Persian Gulf, and his great knowledge of Oriental languages, in addition to his medical and botanical training, placed him in the front rank of Indian pharmacognosists. His "Vegetable Materia Medica of Western India" (1885) and, later, his "Pharmacographia Indica" are storehouses of information on the trade, natural history, and composition of Oriental drugs. Use has also been made of the "Flora of Syria, Palestine and Sinai" by the Reverend G. E. Post (1896), Boissier's "Flora Orientalis," and "A Working List of the Flowering Plants of Baluchistan," by Mr. I. H. Burkill (1909).

Many useful notes on drugs and Persian and Turki names of North Persian plants occur in a series of articles by B. Gilliat-Smith and W. B. Turrill in *K.B.* 1930, Nos. 7–10, entitled "On the Flora of the Nearer East: A Contribution to Our Knowledge of the Flora of Azerbaidjan, North Persia."

ABBREVIATIONS AND PUBLICATION REFERENCES

Abu Mansur—"Book of the Foundations of the True Properties of the Remedies" (970).
Achundow—Translation of Abu Mansur's work, rendered into German by R. Kobert (1893).
Acosta, Christobal, of Burgundy—Traveler in the East; d. 1580.
Afg.—Afghanistan.
Ait.—Aitchison, J. E. T. "Notes on the Products of Western Afghanistan and N. E. Persia," Edinburgh (1890).
Amoen. Exot.—1712; see Kämpfer.
Ar.—Arabic.
Bagh.—Baghdad.
Bal.—Baluchistan.
Bellew—"From the Indus to the Tigris," London (1874).
Beng.—Bengal.
Boiss.—Boissier. "Flora Orientalis," Geneva (1867–84).
Bom.—Bombay.
B. P.—"British Pharmacopoeia" (1914).
Brissemoret, A.—Chemical investigator (1907–26).
C.—See Cowan.
Chin.—Chinese.
Colloquios—Orta, Garcia da, edited by Sir Clements Markham (1913).
Connold—"British Oak Galls" (1922).
Cowan—Cowan, J. M. Collected plants in Persia (1929).
Duk.—Dukani, language of the Deccan, India.
Dymock—Dymock, William. "Vegetable Materia Medica of Western India" (1885); "Pharmacographia Indica" (1891).
Ebert—Ebert, A. E. (1840–1906). American pharmacist.
Egy.—Egypt.
Field—Field collection in Field Museum of Natural History.
Fl. Br. Ind.—"Flora of British India" (1875–98).
Fr.—French.
G.—See Guest.
Gilliat-Smith—Gilliat-Smith, B. and Turrill, W. B. "On the Flora of the Nearer East," K. B. 1930, Nos. 7–10.
Gr.—Greek.
Guest—Guest, Evan. "Plants and Plant Products of Iraq" (1933).
Guz.—Guzerati.
Ham.—Hamadan.
Hind.—Hindustani.
Honigberger—Honigberger, J. M. "Thirty-five Years in the East," London (1852).
Houard—Houard, C. "Les Zoöcécidies des Plantes d'Afrique, d'Asie et d'Océanie" (1923).
Hughes-Buller—Collected plants in Baluchistan (1908).
Ibn Baitar—Great Arabian traveler and botanist (1197–1248).

I. H. B.—Burkill, I. H. "A Working List of the Flowering Plants of Baluchistan" (1909).
Ind.—India.
Ind. bazaars—Indian bazaars.
Irvine, W.—"Materia Medica of Patna" (1848).
Isf.—Isfahan.
Kämpfer—"Amoenitates Exoticae, Lemgoviae" (1712).
Kash.—Kashmiri.
K. B. or *Kew Bull.*—Kew Bulletin.
Kerm.—Kermanshah.
Khory—Khory and Katrak. "Materia Medica of India," Bombay (1903).
Kobert—Kobert, R. "Composition and Uses of Saponin" (1911).
Kurd.—Kurdish.
Lat.—Latin.
Laufer—"Sino-Iranica" (1919).
Layard—Layard, Henry. "Early Adventures in Persia" (1853).
Le Bode—Le Bode, C. A. "Travels in Lauristan and Arabistan."
Leh—Aitchison. "Trade Products of Leh" (1874).
Mad.—Madras.
Makhjan-el-Adwiya.—1769, reprinted 1824.
Mal.—Malayali (South India).
Mason—"Burma and Its People" (1882).
Modern Gr.—Modern Greek.
Pers.—Persian.
Pharmacog.—"Pharmacographia," by Fluckiger and Hanbury (1874).
Pharm. Journ.—"Pharmaceutical Journal."
Ph. Ind.—"Pharmacographia Indica" (1891).
Ph. Pers.—"Pharmacopoeia Persica" (1681).
Port.—Portuguese.
Post—Post, G. E. "Flora of Syria, Palestine and Sinai" (1896).
Punj.—Punjab.
Razis or *Rhazes*—Islamic physician (850–923). "Continens."
Royle—Royle, J. R. "Illustrations of Himalayan Botany" (1839).
Sans.—Sanskrit.
Schl.—Schlimmer, J. L. "Terminologie Médico-Pharmaceutique et Anthropologique Française-Persane" (1874).
Sci. Pa.—Hanbury, D. "Science Papers" (1876).
Sino-Iranica—See Laufer.
Stapf—Stapf, Otto (1857–1933). Botanical papers in Kew Bulletin, etc.
Sud.—Sudanese.
Syr.—Syrian.
Tab.—Tabriz.
Tam.—Tamil.
Teh.—Tehran.
Tri.—Tripoli.
Tschirch—Tschirch, A. "Handbuch der Pharmakognosie" (1912).
Turk.—Turki.
Warden—Warden, C. J. H. Calcutta (1851–1901), joint editor of "Pharmacographia Indica."
Wiesner—"Die Rohstoffe des Pflanzenreiches," ed. 4 (1927).
W.H.M.M.—Collection in Wellcome Historical Medical Museum, London.
Yark.—Yarkand.
Y. B. Pharm.—"Year Book of Pharmacy."
Zellner—Zellner, J. Phytochemical investigator (1923–27).

Abrus precatorius L. (Leguminosae)

چشم خروس

Chashm-i-khurūs (Pers.); Rati (Hind.); Jequirity (Tupi, Brazil); Paternoster seed, Indian licorice.

Schl.; Fl. Br. Ind. 2: 175; Ph. Ind. 1: 430.

W.H.M.M. 150736; K.B. 301.

This plant is cosmopolitan in the tropics and grows in India. The well-known scarlet seeds, with a black spot at one end, are exported from India to Iran and other countries in the West, and are made into necklaces and rosaries. They were formerly used in India as a standard weight by goldsmiths, the average weight of a seed being 1.7 grams.

In medicine the seeds are said to have hilarant properties, and in Iran they are classified among the poisons. The seeds contain toxalbumin, a protein body. The leaves and root contain sugars (D. Hooper, *Pharm. Journ.* 1894, 937).

Acacia Senegal Willd. (Leguminosae)

ضمغ ارژن

Samgh-i-arzhan, Angūm (Teh.); Samgh Arabi (Ar., Pers., Iraq); gum arabic.

Field 78A, 257; 30, 70 (Iraq); W.H.M.M. 150716.

Acacia Senegal is the chief source of gum arabic of commerce, but in the Eastern bazaars many gums are sold which are procured from various other trees. Schlimmer in his "Terminologie" speaks of Gummi nostras or indigenous gum obtained from cherry and prune trees.

Acanthophyllum squarrosum Boiss. (Caryophyllaceae)

شیر کلن

Shir Kalan (Teh.); the root.

W.H.M.M. 150848.

This is one of the Irani soap-roots. It is smaller than the usual roots supplied by species of Gypsophylla, as it occurs in pieces 3 to 18 mm. in diameter, has an exterior of light brown, twisted spirally, with a white, starchy interior showing yellowish, woody rays. The root has a slightly bitter taste and contains small quantities of saponin.

Achillea Santolina L. (Compositae)

گل بومادران

Gul-i-būmādarān (Teh.); Bui madaran (Punj.); Birinjasaf (Ind. bazaars); yarrow.

Ait.; I.H.B.; Schl.; Boiss. 2: 266; Ph. Ind. 2: 272.

Field 236; W.H.M.M. 150802; K.B. 302.

This plant is widely distributed in the East and in northern Africa, where the flowering tops, with a pleasant aroma, are collected and used as a carminative and tonic. In Tehran they are given as an infusion for chest complaints. In Baluchistan the drug is given to children for colic. The strong odor of the herb, like that of other composites, drives away fleas and noxious insects.

Acorus Calamus L. (Araceae)

اکسیر ترکی

Aksīr-i-turkī, Ajīl-i-turkī (Teh.); Ighir iggur (Ar.); Acoron (Gr.); Gora vach (Hind.); Bach, Warch, trade names in Leh by Punjabis; calamus or sweet flag root.

Field 174; W.H.M.M. 150826.

A native of eastern Europe and Central Asia this has become widely diffused by cultivation. The rhizome has long been esteemed as a valuable medicine in India and Iran, whence probably its use spread to Europe. It is a bitter aromatic stimulant, tonic, and carminative. In Tehran it is reputed to be an excellent remedy for rheumatism. On account of its aroma the powdered root is regarded as an insectifuge and insecticide, and the volatile oil is used for scenting snuff and for the preparation of aromatic vinegar.

Adansonia digitata Juss. (Bombacaceae)

فتفته

Fūtfūteh (Teh.).

W.H.M.M. 150744.

The baobab or cream of tartar tree is a native of tropical Africa introduced into the East Indies. The substance sent under the name of Fūtfūteh is in lumps of brownish vegetable matter consisting of the fibrous pulp surrounding the seeds inside the gourd-like fruit. The fresh pulp is acid and astringent and is given in cases of diarrhea and dysentery.

Adiantum Capillus-Veneris L. (Polypodiaceae)

پر سیاوش

Parr-i-siyāvash, Kashburat (Teh.); Kashburat-el-bir, "coriander of the wall" (Pers.); Krafas-al-bir, Shar-al-anat (Iraq); Kansburaj, Moohar-khas (Ind. bazaars); the fronds.

Ait.; Post; Schl.; Ph. Ind. 3: 624.

Field 49; W.H.M.M. 150714; K.B. 302.

The maidenhair fern is found in Iran, Afghanistan, the northwestern Himalayas, and western China, but other species of ferns are used medicinally and are called by similar names. The fronds of the fern are usually supplied, but the rhizome is credited with expectorant properties and is given for relieving difficult respiration and for spasms in whooping cough.

—A maidenhair fern decoction is served as a cooling drink during the summer (H.F.).

Agaric (Fungi)

قارچ

Qārch (Teh.); Kriwarik (Turk.); dried mushrooms.

Field 242; W.H.M.M. 150775.

This is a portion of a hard fungus, gray brown on the outside and whitish within, 4 to 5 inches across. A notation is made on one sample that it is a vermifuge. Schlimmer identifies "Ghartsche" as *Agaricus esculentus*, one of the edible mushrooms, of which there are numerous species. For agaricum of the Greeks, Ghariqun, see *Polyporus officinalis*.

Alhagi camelorum Fisch. (Leguminosae)

تر نجبین

Tar-anjubin (Teh.); "green honey"; manna.

Field 1; W.H.M.M. 150888.

The camel's thorn (Kār shūtur, Pers.) is a thorny shrub found in the deserts of Iran, Syria, and Egypt. A saccharine exudation forms on the plant. It is shaken off the branches, collected, and used as a sweetmeat and in medicine. It is supposed to be the "greenish cake" of Layard's "Travels," but this secretion was collected from oak trees (see *Quercus*). The white grains of manna separated from the pods, stalks, and leaves contain chiefly cane sugar; this is administered as a laxative and expectorant.

Allium Akaka Gmel. (Liliaceae)

والک

Vālik (Teh.); the plant.

W.H.M.M. 150838.

This plant is found in Europe and northern Asia, and is the Welec or Weleque of Ehlicher. The specimen is represented by the entire plant: leaves, pinkish green flowers, and bulbs, having a strong alliaceous odor.

Allium Cepa L. (Liliaceae)

تخم پیاز

Tukhm-i-piyāz (Teh.); Basal (Ar.); Goondina (Pers.); Piaz (Kurd.); the seeds.

Field 41, 415; W.H.M.M. 150831.

The onion is probably the earliest kind of food plant and is widely cultivated in tropical, subtropical, and temperate countries. Its small, black, corrugated seeds are sold in all the bazaars of Iran and are regarded as a demulcent and stimulant.—Boiled with sugar and almond oil they are given as a purgative during typhoid fever (H.F.).

Allium sativum L. (Liliaceae)

تخم ترہ

Tukhm-i-tarrah (Teh.); (tarrah is the Persian name for potherb); the seeds.

Boiss. 5: 229.

Field 40; W.H.M.M. 150883; K.B. 302.

Under this name the black, angular seeds of garlic are sold in the bazaars, having similar properties to those of the onion. They are eaten with cheese.

Sir (Teh., Iraq); Som (Ar.); Thum (Turk.); Lehsan (Hind.); garlic.

Field 47A, 77, 115 (Iraq).

This is the bulb of the garlic, containing several daughter bulbs or cloves. They have a peculiarly pungent and disagreeable odor and an acrid and burning taste. The garlic is *par excellence* the potherb of the East, aids digestion, and is a gastric stimulant. Three kinds of the plant are grown in Iran: Bustani (garden), Bari (wild), and Kirathi (leek-like).

Aloe Perryi Baker (Liliaceae)

صبرزرد

Sabr-i-zard (Teh.); Sibar, Musabbar (Ar.); Bol shiah (Hind.); bitter aloes.

W.H.M.M. 150786.

This specimen is a piece of Socotrine aloes prepared from the leaves of the plant. It is a black or liverish colored extract with a brownish yellow dust. Aloes is a well-known purgative, introduced by Arab traders in early times.

Althaea lavateraefolia DC. (Malvaceae)

ریشه خطمی

Rīshah-i-khatmī (Ham.); the root.

Achundow; Schl.; Boiss. 1: 828; Post; Ait.; I.H.B.

K.B. 303.

This plant grows in Egypt, Iran, and Afghanistan. Aitchison says it is cultivated not only for the showiness of its flowers but for its petals, which are collected as they fall off the plant and are called Gul-i-khatmī, the seeds Tukhm-i-khatmī. The root from Hamadan agrees with that of the above-named species. In Baghdad the roots (Erok Chatma) are said to belong to the hollyhock (*Althaea rosea* L.), but Achundow refers the drug to *A. ficifolia* Cav. The root is fibrous, light-colored, and becomes mucilaginous when soaked in water. It is considered strengthening, and is probably an Irani substitute for the root of the marshmallow of Europe (*Althaea officinalis* L.).

Althaea sp. (Malvaceae)

گل خطمی

Gul-i-khatmī (Teh.); the flowers.

Field 20; W.H.M.M. 150828.

Tukhm-i-khatmī (Isf.); the carpels.

Field 401, 35 (Iraq).

These drugs are doubtless derived from more than one species of *Althaea*. The hollyhock (*A. rosea* L.), *A. ficifolia* Cav., and *A. lavateraefolia* DC., and various hybrids yield medicinal flowers and seeds. In Baluchistan the flowers of *A. pallida* Wald. & Kit. are collected. They are yellow and pink, with hairy calyces. The seeds, or properly carpels, are brown, reniform, and hairy; the margin is marked with fan-like ridges. All parts of these plants are mucilag-

inous and demulcent.—The flowers, often mixed with linseed and boiled, are made into poultices for boils, and the seeds or carpels are given as a tea for coughs and inflammation of the chest (H.F.).

Alyssum campestre L. (Cruciferae)

فندامه شهری

Gudāmah, Gudāmah-i-shahri, Gudāmah-i-shērazi (Teh.); Qodumah (Ar.); Ghodaoumche chirazi (Schl.); hedge garlic, the seeds.

Field 3; W.H.M.M. 150727, 150868; K.B. 303.

The seeds of this small plant, common in Iran and Iraq, are light brown, lens-shaped, 2 by 1.5 mm., with a yellowish gray border. They become coated with semi-opaque mucilage when placed in water.—Mixed with *Lallemantia Royleana* Benth., *Pyrus Cydonia* L., and *Plantago major* L., the seeds are given in an infusion for coughs (H.F.).

Amaranthus paniculatus L. (Amarantaceae)

تاج خروس

Tāj-i-khurūs (Teh.); Tukhm-tāj-i-khurūs (Isf.); flower heads and seeds of cockscomb or star flower.

Field 92, 425; W.H.M.M. 150874.

The chaffy flower heads are white with shades of pink or light brown. The black, shining, lens-shaped seeds are eaten, and are medicinal. Cockscomb leaves form a wholesome potherb, and are taken as a tea to relieve the chest.

Amomum subulatum Roxb. (Zingiberaceae)

هل قراب

Hil-i-qurāb (Teh., Isf.); Hil (Ar.); Ela (Sans.); hill or Nepal cardamoms.

Field 421; W.H.M.M. 150729.

The capsules are ovate and bluntly triangular, containing numerous round or angular brown seeds, closely packed. The odor of the seeds is camphoraceous and agreeable. Hill cardamoms are used as a substitute for the smaller and more aromatic Malabar cardamoms of southern India (*Elettaria Cardamomum* Maton). They are both used as a spice and for their carminative and stimulating properties.

—As a cure for general debility they are sometimes mixed with Belleric myrobalans (H.F.).

Anacyclus Pyrethrum DC. (Compositae)

عاقر قرحا

Agirgarhā (Teh., Isf.); Akalkara (Hind.); pellitory of Spain; the root.

Field 410; W.H.M.M. 150791.

Pellitory root, obtained in northern Africa, is nearly cylindrical in shape, tapering near the tip, with a tuft of hairs or the remains of leaves toward the crown. When chewed the drug has a pungent taste, exciting a flow of saliva.—It is prescribed for toothache (H.F.).

Anamirta paniculata Coleb. (Menispermaceae)

مرک ماهی

Marg-i-māhī, "fish poison" (Teh.); Zahar (Iraq); the berries.

Field 138, 101 (Iraq); W.H.M.M. 150746.

Cocculus indicus or Levant berries are yielded by a shrub indigenous to eastern India and the Malay Archipelago. The fruits are round or kidney-shaped, dark brown without, each containing a white seed with oily, bitter endosperm. The power possessed by the fruits, when thrown into water, of stupefying fish has long been known, and is due to the poisonous crystalline principle, picrotoxin, in the seed. The berries are used in the East for poisoning dogs and fish and for making ointments to destroy pediculi on the skin.

Anthemis Wiedemanniana Fisch. & Mey. (Compositae)

کل بابونه

Gul-i-bābūna (Ham.); flower heads.

Achundow; Ait.; Post; Schl.; Boiss. 2: 286; Pharmacog. 346; Ph. Ind. 2: 275; I.H.B.

K.B. 303.

Banoi is probably a contraction of Bābūna or Babunaj, a name for camomile and other medicinal composites, including the above.

Irani camomile flowers are generally obtained from *Matricaria Chamomilla* L. (q.v.).

Apium graveolens L. (Umbelliferae)

تخم کرفس

Tukhm-i-karafs (Teh.); Buzz-ul-karaphs (Ar.); Asil-a-krasb (Afg.); Karafs (Iraq); Ajmud (Hind.); Udasaliyun (Gr.); wild celery fruits.

Field 177; W.H.M.M. 150808.

Celery is a plant of the northwestern Himalayas and Iran, and is cultivated for its fruit, leaf stalks, and roots. The seeds, or properly fruits, are greenish yellow or brown, and have a mint-like aroma and a somewhat pungent and bitter taste. The fruit is carminative, aromatic, and tonic. In Tehran the drug is placed in boiling water and the steam inhaled for headache. The fruits contain apün, a jelly-like glucoside.

Arctium Lappa L. (Compositae)

ریشه بابا آدم

Rīshah-i-bābā-Adam (Teh.); the root. Bardane (Teh.); Semen Bardanae (English Herbal 1730); the fruits.

Field 234; K.B. 304.

The burdock plant is found in Syria, Iran, and Khorasan as well as in Europe. The root under the name of Risha Baba Adam or "Root of Father Adam" is quoted in Schlimmer's "Terminologie," and is regarded throughout India as depurative and antiphlogistic. In Tehran the root, with that of sarsaparilla, is used as a remedy for syphilis. The drug has had a considerable reputation in ancient times, but from a chemical examination by Zellner (1924) there is no indication of any substance in the root being physiologically active.

Areca Catechu L. (Palmae)

فوفل

Fūfal (Teh., Ar.); Papal (Pers.); Sopari (Hind.); Pinang (Mal.); betel nuts, nuts of the Areca palm.

Field 149.

Areca nuts are used everywhere in the East as a masticatory. They are a gentle stimulant, astringent, and taenifuge, increase the flow of saliva, lessen perspiration, sweeten the breath, and strengthen the gums. They contain tannin and two active alkaloids, arecoline and arecaine.—Mixed with sugar and coriander, they are given for induction of labor (H.F.).

Aristolochia longa L. (Aristolochiaceae)

زراوند طویل

Zarāvand-i-tavīl (Ham., Teh.); the roots.

Achundow; Schl.; Ph. Pers.; Post; Ph. Ind. 3: 165.

W.H.M.M. 150855; K.B. 304.

The roots of this and other species of birthwort are highly valued medicines in the East. The drug from Iran is a cylindrical and contorted root, 12 mm. in diameter, showing in section the peculiar wedge-shaped bundles of the wood. It has a somewhat bitter and pungent taste. The Aristolochias are stimulating tonics and are often given for snake bites. Locally the root is used for amenorrhea and as a pectoral and stomachic.

Aristolochia rotunda L. (Aristolochiaceae)

نخود الوند

Nukhūd-i-alvand (Teh., Isf.); Nukhund-i-alavandi (Ar.); Zaravand-i-gird (Pers.); the roots.

W.H.M.M. 150761.

The roots are tuberous, brownish or gray, round in shape like a small cottage loaf, with a broad base, a top narrow and marked with pit-like scars and the remains of fallen stems. They are hard, horny, and starchy, and have an acrid odor and taste. The drug is given as a tonic, diuretic, emmenagogue, and vermifuge. In Iraq *A. Maurorum* L. is used by the tribes to provide an antiseptic for healing wounds, and also for curing scab in sheep (G.).

Artemisia maritima L. (Compositae)

درمنه

Darmanah (Teh.); Afsant-el-bahara (Ar.); santonica, wormseed.

Ph. Ind. 2: 288; Greenish and Maplethorpe, Y.B.Pharm. 1923, 646.

Field 179; K.B. 304.

The dried, unexpanded flower heads of various species of *Artemisia*—often mixed with *A. vulgaris* L. and water (H.F.)—are used as a vermifuge. The provinces of Turkestan and Kurdistan supply large quantities. Aitchison says that *A. maritima* L. and *A. campestris* are to be found everywhere in northeastern Iran. The rootstocks and dry stems are used for fuel, and the flower heads collected from the villages around Tehran are sold in the bazaars. Santonin, the active, anthelmintic principle of wormseed, is now manufactured near the town of Chimkent in Turkestan (Ph. Ind. 2: 288).

Artemisia vulgaris L. (Compositae)

افسنطين

Afsantīn (Teh.); Afsantīn-i-hindi (Ar.); wormwood.

Ph. Ind. 2: 284.

Field 180; W.H.M.M. 150753; K.B. 305.

The specimens of this drug are broken pieces of stalks, leaves, and flower heads, matted together with woolly hairs. They have a fragrant aroma and bitter taste. The origin of this ancient drug, described by Mohammedan physicians, is probably *A. absinthium* L., but other species are used. *A. ponticum*, a plant growing in Europe and in the Caucasus region, is quoted by Schlimmer as the source of the drug sold in his day in Tehran. Absinthium is a bitter, stomachic tonic; it increases the appetite and promotes digestion. The Persian name of these plants has been given to absinthe, a well-known liqueur used in Europe.

Asarum europaeum L. (Aristolochiaceae)

اسارون

Asārūn (Teh.); snake root.

W.H.M.M. 150765.

This drug consists of rhizomes, thicker than a pencil, knotted, with circular marks above and long, light brown rootlets below. The wood is yellowish, bitter, and rather fragrant. The drug is employed as an emetic, diaphoretic, diuretic, and purgative, and is prescribed for rheumatism and apoplexy.

Asparagus adscendens Roxb. (Liliaceae)

مازچوبه

Mārchūbah, Khushak (Ham.); Satavar, Satarmul, Shakakula micari (Hind.); Sufed musli, of commerce (Bom.); white musali.

Ait.; Schl.; Post; Boiss. 5: 339; Ph. Ind. 3: 482.

Field 416; K.B. 305.

The roots of several species of *Asparagus* are used in the East for medicine, including those of *A. officinalis* L., *A. sarmentosus* Willd., and *A. racemosus* Willd. The root from Hamadan is in long, thin pieces, 2 to 3 mm. in diameter, ivory-white, hard, horny, wrinkled longitudinally, and somewhat twisted. It swells in water and becomes mucilaginous. The root is considered to have stimulant and diaphoretic properties.—As a diaphoretic it is mixed with sheep's fat and rubbed on the chest (H.F.).

Asparagus officinalis L. (Liliaceae)

هلیون

Haliyūn (Teh.); common asparagus berries.

W.H.M.M. 150767.

بیخ هلیمون

Bīkh-i-halīmun (Teh.); asparagus root.

Field 161; W.H.M.M. 150741.

The berries are scarlet, the size of a pea, holding two seeds in each cell. They contain grape sugar and sparganein, a coloring matter; the seeds contain a fixed oil and aromatic resin.

The roots are twisted, black on the outside, white and horny within, mucilaginous when soaked in water, with a mawkish and sweet taste. In Tehran the roots are burned and the smoke is inhaled to relieve toothache.

Asperugo procumbens L. (Boraginaceae)

باد رنجه بویه

Bād-i-ranjah-būyah, Bār ranjūbah (Teh.); madwort, the herb.

Schl.; Boiss. 4: 275; Post, 540; I.H.B.

Field 198; W.H.M.M. 150807; K.B. 306.

This is a prostrate herb in Arabia, Iran, Europe, and North Africa. It is common in cultivated fields and gardens. The fruiting calyx is reticulate-veined, with acute, ciliate lobes. The substitution of this plant for the well-known, fragrant drug, Badrandj-boia, a remedy for asthma, still persists in Iran. Schlimmer writing about *Asperugo* says, "This plant, dried, is sold by the druggists of Tehran under the false name of Badrendj-bou-yeh, which is the true name of *Melissa cedronella.* I have never been able to understand the reason of this sophistication, to which Dr. Haussknecht was the first to call attention, because the true *Melissa* is largely cultivated in the gardens about Tehran."

Astragalus fasciculaefolius Boiss. (Leguminosae)

کنجده سرخ وسفید

Kunjidah-i-surkh u safīd (Teh.); Kunjad, Gujar (Bom.); Kunjada, "resin for bleeding" (Ait.); Anzarut (Ar.); Sarcocolla, "flesh glue" (Gr.); Kohl Farsi (Persian collyrium), Kohl Kirmani (Kirmani collyrium); the gum.

Ait. 18; Ph. Ind. 1: 476; D. Hooper, Journ. As. Soc. Bengal, 9, No. 4, April, 1913, pp. 177–181; Achundow; Schl.; Boiss. 2: 396.

W.H.M.M. 150788; K.B. 306.

This is a sweet exudation secreted by the above plant obtained from Kurdistan and exported to India and elsewhere. It occurs in pale, yellowish brown fragments, brittle in consistency, soluble in

water and alcohol, odorless but with a sweetish taste. It contains a principle similar to glycyrrhizin. Sarcocolla forms a plaster long used by Parsi bone-setters, and is applied locally to the ears and face to allay neuralgic pains. Aitchison says the gum is used by ladies of the harem to improve their appearance and to give the skin a gloss (see "Sarcocolla" by D. Hooper, *Journ. As. Soc. Bengal*, Vol. 9, 1913, pp. 177–181).

Astragalus gummifer Labill. (Leguminosae)

كتيرا

Kathīrā (Teh.); Qatera, Katira gond (Hind.); gum Tragacanth. Field 128; W.H.M.M. 150861.

The small, branching, thorny shrubs of *Astragalus* are especially to be found in Asiatic Turkey and Iran, where they form one of the most characteristic features of the vegetation. The above and other species yield, when incised, flat, ribbon-shaped pieces, or, when punctured, vermiform tears. The tragacanth gum from Tehran is in clean white ribbons, typical of the best commercial quality, largely used in medicine and confectionery.

Astragalus hamosus L. (Leguminosae)

اکلیل الملك

Iklīl (Teh.); Iklīl-ul-malik (Ar.); Adhafir-aj-jian, Adhafir-ash-shaitan (Iraq); Iklil-ul-mulk (Bom.); Aketi (Ham.); the curved pods. Field 145; W.H.M.M. 150889; K.B. 342.

The origin of this drug has been referred to various species of *Melilotus* and *Trigonella* which have curved pods. Those received from Tehran and Hamadan are horseshoe-shaped, 2.5 cm. in length, grayish brown, smooth, curved outward, grooved on both sides, and beaked; they are divided by a central partition and contain grayish yellow, rhomboidal seeds, notched at one end and with black spots. The pods are called in Iraq "Fairies' Nails" or "Devil's Claws," and are used for various disorders, but chiefly as a suppurative and astringent. Sometimes they are made into a plaster for reducing tumorous and painful swellings.—Mixed with *Viola* sp., they are taken before purgation (H.F.).

Bambusa arundinacea L. (Gramineae)

تبا شیر قلمی

Tabāshīr-i-qalamī (Teh.); Tabashira (Ar.); Bans lochan (Hind.); mineral concretion in stems of bamboo.

Field 244.

Tabashir is a siliceous concretion found in the hollow stems of bamboo plants, and is a valuable Hindu medicine. It occurs as hard, white, opaque, mineral-like fragments of various shapes. The sample from Tehran, bearing the above vernacular name, consisted of burnt bones, and was not true tabashir.—It could not, however, be considered a fraudulent substitute for the authentic drug, as it was labeled "Calcined bones for toothpowder" (H.F.).

Berberis vulgaris L. (Berberidaceae)

زرشک کلی

Zirishk-i-gulī (Ham., Teh.); Zarishk (Hind., Bom.); the fruits.

Achundow; Ait.; Schl.; Boiss. 1: 103; Ph. Ind. 1: 65.

W.H.M.M. 150841; K.B. 306.

The Indian barberry is a common shrub growing in the hilly districts of India and Iran, and the berries are largely collected and appreciated as a condiment or made into jam. In the Punjab the fruits and preserve are called Zirishk-tursh (sour currants) to distinguish them in the trade from the small, black, dried grapes known in Europe as currants or corinths. The consumption of these acid fruits in medicine is said to relieve itch and other skin complaints.

—A specimen of dried *Berberis* fruits in the collections of the American School for Boys, Baghdad, bears the label Zirishk. Barberries are used as a decoction for general health and to sweeten the breath (H.F.).

Beta vulgaris L. (Chenopodiaceae)

تخم چقندر

Tukhm-i-chuqundur (Teh.); Chuk-andar (Hind.); common beet.

Field 28 (Iraq); W.H.M.M. 150787.

These are small, cup-shaped fruits with light brown seeds, which taste saltish. In Iran they are cultivated largely as a vegetable. The seeds of the beet are sold in Indian bazaars for medicinal use under the name of Chukander (Ph. Ind. 3: 148).

There are several varieties grown in Iraq:

(1) Beetroot. Chukundar (Turk.). The root is eaten.

(2) Spinach beet. Siliq (Turk.); common. The leaves are cooked and eaten as a substitute for spinach.

(3) Sugar beet. Shuwandar sukari. Climate of the Baghdad area is unsuitable for cultivation.

(4) Mangel-wurzel should succeed in Kurdistan.

(5) Wild beets, known as Silaijah or Silaigah.

Boswellia Carterii Bird. (Burseraceae)

کندر

Kundur (Teh.); Seta Kundura (Hind.); frankincense or olibanum. Field 199.

There are several kinds of this fragrant oleo-gum-resin found in commerce. Kundura zakara, "male frankincense," is in reddish or deep yellow, circular tears; Kundura unsa, "female frankincense," is in yellowish white, translucent or pale tears; Kisher Kundur or Dhupa of the bazaars occurs in scaly pieces of the bark coated with the exudation.—Olibanum is used chiefly as incense; it is an ingredient in plasters; a dose of half a misqal (35 grains) is said to improve the memory (H.F.).

Brassica campestris L. var. **Napus** Bab. (Cruciferae)

تخم شلغم

Tukhm-i-shalgham (Teh.); Sarsun (Hind.); rape or colza seed. Field 54 (Iraq); W.H.M.M. 150856.

This is an important crop in India and elsewhere, cultivated chiefly for its seed. Rape seeds are small, brownish or reddish brown, 2 mm. in diameter, smooth. They yield by expression a bland oil used as an emollient and in cooking and lighting.

Brassica (Sinapis) **nigra** (L.) Koch, and **B. alba** Rabenh. (Cruciferae)

خردل

Khardal.

Mustard, now a widespread weed, is of Eurasian origin. The powdered seeds are an important condiment, used in curries, and medicinally in the preparation of poultices and plasters. Mustard is taken internally as an emetic in cases of narcotic poisoning (G.).

Butea frondosa Roxb. (Leguminosae)

برک هند ایران

Barg-i-hind īrān, Parakeh-i-hindī (Teh.); Palaspapado (Duk.); Palas Keby (Hind.); seeds of bastard teak or Bengal kino tree.

Field 181; W.H.M.M. 150818.

These seeds are flat, reddish brown, 5 by 3 cm., containing white cotyledons. The seeds are an Indian remedy for tapeworm. The powdered seeds are prescribed two days after a dose of wormseed.

Caesalpinia Bonducella Roxb. (Leguminosae)

تخم ابلیس

Tukhm-i-iblīs (Teh.); Khaza-i-iblīs, "Devil's testicles"; Bonduk-i-hindi (Ar.); Kat karanj (Hind.); bonduc nut, nicker tree.

W.H.M.M. 150709.

Bonduc seeds are globular, smooth, dull gray in color, and yield an oil by expression. They are worn as necklaces for charms, and the kernels are bitter, tonic, antiperiodic, and anthelmintic.

Calamintha graveolens Benth. (Labiatae)

ترنگمسک

Terengamisk(?) (Teh.); Faranj mishk or Biranj mishk; Palang mishk has been referred to *Ocimum sanctum* L., and Palenguemeeke by Schlimmer to *Dracocephalum Kotschyi* Boiss.

Boiss. 4: 583; Post 624.

Field 32; K.B. 306.

This species of calamint frequents the Mediterranean region, Syria, Asia Minor, Iraq, and Trans-Caucasia. The seeds are known in India, where supplies come from Iran. They are dark brown, oblong in shape, 2 by 1 mm., three-angled, tapering toward the umbilicus, where there is a white, V-shaped mark; they are feebly pungent and become coated with transparent mucilage when soaked in water. The seeds are stimulating and aphrodisiac.

Calendula officinalis L. (Compositae)

همیشه بهار

Hamīshah bahār (Teh., Iraq); Gole himmicheh behar (Schl.); Qarah Koz (Turk.); marigold flowers.

Field 123.

The pot marigold, a plant of the Mediterranean coast, is a weed of cultivation in northern India, and is much grown in gardens for its ornamental flowers. The yellow flower heads are bitter and have long been used among domestic remedies. "A tincture made from the dried florets was formerly used in medicine for application to wounds" (Guest).

Capparis spinosa L. (Capparidaceae)

ریشه کبار

Rīshah-i-kabar (Teh.); Kabar (Pers., Iraq); the bark.

Ph. Ind. 1: 131; Boiss. 1: 420.

Field 200; W.H.M.M. 150803; K.B. 307.

The thorny caper is found in western Asia, Europe, North Africa, and Australia. It is a common shrub in the open country, forming great bushes fully 5 feet high.

Throughout Iran the flower buds are collected to be made into pickles. The light-colored root and the thick root bark are used in medicine, the bark being the Capparis Cortex Radicis of the old "Persian Pharmacopoeia." They are both pungent and bitter and are given for intermittent fever and rheumatism.

Capsicum frutescens L. (Solanaceae)

فلفل مویه

Filfil mūyeh, Filfil-i-surkh (Teh.); Filfil ahmer (Ar.); Lal mirch (Hind.); red pepper, bird pepper, chilies.

Field 96A, 111A; W.H.M.M. 150914.

This species of peppers or chilies, *Capsicum* and *C. annuum*, are cultivated throughout India and Iran for their pungent fruits, and are used throughout the East for culinary purposes. Capsicums and their preparations act as a powerful local irritant. In medicinal doses chilies stimulate the alimentary canal, promoting the flow of gastric juice "to increase appetite and aid digestion."

Carthamus tinctorius L. (Compositae)

کافشه

Kāfshah, Tukhm-i-kāfshah (Teh., Ham.); the seed.

Gul-i-rang (Teh.); Gul-i-kajira, Qurtum (Ar.); Kusam (Hind.); Atractus (Gr.); safflower, the flowers.

Ait.; Post; Schl.; Laufer 324; Ph. Ind. 2: 308.

Field 33, 39A, 195; W.H.M.M. 150866; K.B. 307.

The safflower plant is cultivated in Syria, Iran, and Afghanistan as a field crop for its red florets, which are used as a dyestuff and cosmetic. The red flowers are often supplied as a cheap substitute for saffron, the stigmas of *Crocus sativus* L.

The fruits or achenes, called parrot seed, the size of barley grains, yield by expression an oil which is used as a salve for sprains and rheumatism.

Carum Bulbocastanum Koch (Umbelliferae)

زیره سیاه کرمانی

Tukhm zīreh (Teh.); Zireh-siyah, Kirmani (Isf.); Kala-zirah (Afg.); Jira-shak (N.E. Pers.); black caraway.

Field 35, 441; W.H.M.M. 150909.

These fruits constitute the spice called black caraway of Iran and northern India. Royle described the plant yielding these fruits as *Carum nigrum*, but Aitchison was the first to observe that they were collected from a plant with tuberous roots. They are a substitute for the ordinary caraway of Europe (*C. Carui* L.), and are used in medicine as a carminative.

Carum copticum Benth. & Hook. (*Sison Ammi* L.; *Trachyspermum Ammi* Sprague ex Turrill; *Ptychotis Ajowan* DC.; *Ammi copticum* L.) (Umbelliferae)

زنیان

Ziniyān (Teh., Ham.); Ajowan, Ajwain (Hind.); Omum (Tam.); Ammeos (Ph. Pers.); Basilikon Kuminon (Gr.); bishop's weed, the fruits.

Boiss. 2: 898; Fl. Br. Ind. 2: 682; Ph. Ind. 2: 116.

Field 17; W.H.M.M. 150750; K.B. 308.

This is an African plant, cultivated in Europe, Iran, Afghanistan, and throughout India. The aromatic fruits were a well-known medicine among the ancient Greeks and Arabs. The Irani drug is produced largely in the province of Shiraz. The fruits are brownish gray, smaller and more curved than caraway seeds. The fragrance and active principle reside in an essential oil holding a stearoptene, called thymol, which crystallizes out at ordinary temperatures. Thymol is known in India as Ajwain-ka-phul or "Flowers of Ajwain." The distillate obtained from the fruits when boiled with water is called "Omum water," and is used as a carminative for children and as a cholera remedy.

Carum Petroselinum Benth. & Hook. (Umbelliferae)

تخم کلم

Tukhm-i-kalam (Teh.); Maghdunes (Iraq); Pitar saleri (Hind.); parsley seed.

W.H.M.M. 150829.

Parsley is a plant of southern Europe, cultivated in kitchen gardens for its leaves, which are used as a condiment. The fruits

are a grayish green or greenish brown, 2 mm. long and 1 to 2 mm. thick, laterally compressed; the odor and taste are aromatic. The chief constituent is a volatile oil containing apiol which, on standing, separates in crystals (parsley camphor). Commercial apiol is a viscous, oily liquid prepared by extracting the seeds with ether. The fruits are aperient and febrifuge, and apiol is given for dysmenorrhea and amenorrhea.

Cassia Absus L. (Leguminosae)

چشم

Chasm (Ham., Teh.); Hab-us-sudan (Ar.); Chaksu seed of India; Egyptian cassia seed.

Ph. Ind. 1: 524; Fl. Br. Ind. 2: 265.

Field 155; W.H.M.M. 150817; K.B. 308.

This plant is widely distributed in the tropics of the Old World. The small, black, lens-shaped seeds have long been known in the East in the treatment of eye diseases; Chaksu in Sanskrit means "an eye." In some districts a plaster made from the seeds is recommended as an application for wounds and sores. In Hamadan the seeds are classed among the poisons.

Cassia acutifolia Delile (Leguminosae)

سنا

Sanā' (Teh.); Sana mukhi (Iraq); Sana-hindi (Ar.); senna.

Field 143, 44A; W.H.M.M. 150844.

Senna leaves are imported into Iran from India. In Tehran they are used as a purgative, mixed with a confection of rose leaves and tamarind.

Cassia Fistula L. (Leguminosae)

فلوس

Fulūs (Isf.); pods.

Field 15 (Isf.), 415.

The purging cassia is a tree indigenous to India, where the long, cylindrical pods are collected and the sweet pulp is used largely in medicine and exported. According to Aitchison, Folusi is the Turki name for the tree in Yarkand, western Sinkiang, China.

—As a remedy for pyrosis, the central portion of the stem is boiled, the liquid filtered and sugar and almond oil added. Directions are given to drink it early in the morning on an empty stomach and at

intervals during the day. Bread must be omitted from the diet during the time of medication (H.F.).

Celosia argentea L. (Amarantaceae)

كل حلوا

Gul-i-halvā (Isf.); Sarwali (Hind.); cockscomb seeds.

Field 408.

The plant grows throughout India and tropical Asia. The pinkish and yellow flower heads, seeds, and roots are used in medicine. The seeds are lenticular, brown or black, smooth, shining, convex on both surfaces. The leaves are used for poultices; the flowering tops with seeds are given as a nervine tonic and in diarrhea. The author of the "Muffaridat-i-Nasiri" states that 180 grains of the seeds, with an equal quantity of sugar candy, taken daily in a cup of milk, is a powerful aphrodisiac.

—Mixed with *Chrozophora verbascifolia* Juss., the seeds are given as an infusion for chest pains, especially during whooping cough (H.F.).

Celtis australis L. (Ulmaceae)

دغ دغان

Digh-dighane (Isf.); nettle tree.

Field 70.

This ornamental tree is cultivated in Khorasan and near Baghdad, frequently near shrines and holy places. The small, green, wrinkled fruits of *C. caucasica* Willd. are mixed with ordinary flour to be made into bread.

C. Tournefortii Lam., Tawak in Kurdistan, bears small edible fruits like cherries.

Chaerophyllum sp. (Umbelliferae)

قردمانا

Qurdumānā (Teh.); Keruwiah (Isf.); the fruits.

W.H.M.M. 150836.

These fruits are gray-green, elongated, 10 by 1 mm., with a faint caraway odor. Honigberger refers the Arabic Kurdamana to *Lagaecia cuminoides* having similar properties. Stapf informs us that Keruwiah brought from Chahār Mahal and sold for medicine in Isfahan is an allied umbelliferous plant, *Grammosciadium macrodon* Boiss. They are both carminative medicines.

Chahār-tukhmah. The four seeds.

چهار تخمه

In the Field collection there are two samples (183 Tehran and 16 Iraq) labeled "Chahār-tukhmah" and "Mixed seeds." They are sold as a tonic medicine and remedy for diarrhea. The four seeds are Barhang (*Plantago major* L.), Gudamah (*Alyssum campestre* L.), Sepistan (*Cordia Myxa* L.), and Bihidana (*Pyrus Cydonia* L.). It will be noticed that all these seeds are very mucilaginous. Aitchison also refers to a mixture of four seeds sold in the Punjab and Yarkand called "Kam-parah." Kam means "little or deficient," and parah "a portion or piece," suggesting that the four seeds combined make up the whole or perfect remedy. This theory resembles the blending of the five cucurbitaceous seeds in India (see *Cucumis*), where the mixture represents the quintessence of a tonic prescription. The four seeds in the Yarkand collection are Barhang (*Plantago major* L.), Isparza (*P. ovata* Forsk.), Raihan (*Ocimum Basilicum* L.), and Marva (*Salvia* sp.).

Chrozophora verbascifolia Juss. (Euphorbiaceae)

برک قیطران

Barg-i-quitarān (Teh.); Zurraij (Iraq); Nil-kanthe (Punj.); Shahdeve (Hind.); the herb.

Field 404, 405; W.H.M.M. 150719.

This is a common weed in cultivated ground, found in tropical India in the dry season. The drug consists of the leaves, stalks, and fruits of the herb, which are used locally for whooping cough. The plant is known for its alterative properties, and at one time was recommended for leprosy. The seeds, called "Tannum" in Kuwait, contain 35 per cent of a fatty oil, which is used by the Beduins of Arabia as a substitute for clarified butter. The plant is related to the turnsole (*C. tinctoria* Juss.) which, in addition to its yielding a purplish blue dye, has emetic and poisonous properties.

Cicer arietinum L. (Leguminosae)

نخود

Nakhūd (Teh., also Punj. and Turk. names); Chana (Hind.); Nok (Kurd.); Bengal gram, chick pea.

Field 66A, 68A.

The chick pea is a small, annual plant with pinnate leaves. The stems are covered with glandular hairs containing oxalic acid, which,

under the influence of dew, exudes and hangs in drops. This acid liquor is called Chana-no-kheto, and is valued medicinally. The seeds or pulse are gibbous, mucronate, and greenish gray in color. Chana is the favorite pulse of the natives of India, and is taken raw or parched or soaked in syrup as a confection. The seed is named "Nakhud," the name for an Irani weight equal to 1/144 ounce avoirdupois. The seeds weigh, on an average, 5 grains each.

Cichorium Intybus L. (Compositae)

تخم کاسنی

Tukhm-i-kāsnī (Ham., Teh.); Kashi (Hind., Bom., Beng.); Intubus (Lat.); Sem. Cichorii (Ph. Pers.); the achenes (seeds) of chicory.

Kīshah-i-kasni (Ham., Teh.); chicory root.

Ph. Ind. 2: 311; Boiss. 2: 716; I.H.B.

Field 28, 254; W.H.M.M. 150812; K.B. 309.

The chicory plant is indigenous to Iran and is cultivated in India and Europe. It goes under the same name as endive, and the natives of eastern Iran do not distinguish between them (Aitchison).

The root is fleshy and tapering, wrinkled longitudinally, and brown on the outside. The dried and torrefied root is known as an ingredient often mixed with commercial brands of coffee. In Iran, Baluchistan, and India it is a resolvent and cooling medicine for bilious attacks. —For this purpose it is sometimes mixed with *Viola* sp., *Nymphaea alba* L., and *Cordia Myxa* L. (H.F.). The achenes are angled, of pale, mottled gray and have a bitter, mucilaginous taste.

Cinchona Calisaya Wedd. (Rubiaceae)

پوست کنه کنه

Pūst-i-kinah-kinah (Teh.); Qanaqinah (Iraq); cinchona or quinine bark.

Field 125A; W.H.M.M. 150905.

Cinchona bark is sold in small quantities in the Eastern bazaars from Iran to China. It was introduced into Europe in the 17th century when brought over as Kina Kina, or Peruvian bark, by the Jesuit missionaries from South America. After its admission in 1677 to the "London Pharmacopoeia" it was sent out to the physicians of the East India Company. In 1760 the bark powder was being sold in the apothecary shops in Calcutta at Rs.3 per ounce. In 1860 the cultivation of the cinchona tree was established in India, and quinine is now being manufactured in that country in addition to the supplies coming from Java.

Cinnamomum Cassia Blume (Lauraceae)

دارچینی

Dār-chīnī (Isf., the Hindi name); Darasini (Ar.); Chinese cinnamon bark.

Field 14 (Isf.), 108.

The cinnamon bark from China is kept by druggists, and is a favorite spice. It is used in curry and as an ingredient in medicines. The bark is prepared as a tea for excessive salivation, frequent in Iran.

قرفه

Gurfah (Teh.); Kalphah (Bom.); the fruits.

W.H.M.M. 150867.

The small, black fruits of the cinnamon tree from China are sold in the bazaars. In South India the fruits of *C. iners* Reinw. are used in medicine, but are inferior to the above.

برگ ساذج

Barg-i-sādhaj (Teh.); Sādhaj-i-hindī (Isf.); the leaves.

Field 17 (Isf.); W.H.M.M. 150884.

The leaves of the cinnamon are taken internally for rheumatism. The vernacular name is applied by the Indian Mohammedans to the leaves of a wild cinnamon tree in Sylhet used as a carminative and stimulant (Ph. Ind. 3: 209). The leaves constitute the ancient Hindu drug known as Malabathrum, Talispatra, and Folia indica.

Cirsium lanceolatum L. (Compositae)

Foveh (?) (Ham.); thistledown.

Achundow; Boiss. 2: 538; Post.

K.B. 309.

Under this name the white, feathery pappus or thistledown from the above plant is sold in the bazaars. A medicine called "Badawerde" (carried by the wind) consists of the pappus of the holy thistle (*Cnicus benedictus* L.). The downy heads of species of *Volutarella* and *Echinops* are also used as a drug, probably as an absorbent material for external application.

Citrullus Colocynthis Schrad. (Cucurbitaceae)

خربوزه روباه

Kharbūzah-rūbāh, Kabiste talkh (Pers.); Hanzal (Ar.); Handhal, Gozharik (Kurd.); Indrazana (Hind.); colocynth, bitter apple, Indian gourd.

Field 106 (Iraq); 77A (Iran and Iraq).

The colocynth is a trailing, perennial herb with mottled, green or yellow fruit about the size of a large orange, and is common in sandy desert regions in northern India, Iran, and Syria. The rind is brittle and the inner surface is covered with a soft, spongy, white substance with an intensely bitter taste. This pulp, made into an extract, is official in all the pharmacopoeias.

This is a drastic hydragogue cathartic, due to the presence of colocynthin, a crystallizable glucoside. The small, oval, brown seeds contain about 17 per cent of a fixed oil, and, with albuminous matter and salts, are edible and nutritious.

Citrullus vulgaris Schrad. (Cucurbitaceae)

تخم کرمک

Tukhm-i-garmak, Tarbuz (Teh.); Qarpuz (Turk.); Shami (Iraq); watermelon.

Field 73A, 94A; W.H.M.M. 150728.

This melon is cultivated throughout the country in the summer. The fruit is well known for its refreshing pulp, and is sometimes used as a source of water. For two months in the year the watermelon, with a little bread, may be looked upon as the food and drink of the people (Aitchison). The seeds are collected, sold, and eaten, with or without salt; they are chewed as a pastime and considered to have medicinal properties. The seeds also comprise one of the five cucurbitaceous seeds of Hindu medicine, the other four being: *Cucumis sativus* L. (cucumber); *C. Melo* L. (muskmelon, Kharbuz); *Lagenaria vulgaris* Ser. (bottle gourd or Dudhi); and *Benincasa cerifera* Savi (white tallow gourd, Kodu). They are cooling, diuretic, and nutritive.

Citrus aurantifolia (Christm.) Swingle (Rutaceae)

لیمون

Limon, Limon-amman or Limmon Basra (Iraq); Post-i-limon (Afg.); Basra lime.

Field 43A.

Hard, dry lemons or limes the size of a nutmeg, these fruits (Numi Basra) are imported into Iraq from India, and used with sugar for making a beverage called Shai Hamidh (G.).

Citrus sinensis (L.) Osbeck (Rutaceae)

Four products of the orange tree are used in medicine in Iran:

بهار نارنج

Flowers: Bahār-i-nāranj, "spice of orange" (Teh.); Naphae flores (Schl.); neroli.

Ph. Ind. 1: 270.

Field 219; W.H.M.M. 150778; K.B. 309.

The dried flowers of the cultivated orange are sold in bazaars and recommended as a stimulant and to prevent dysentery. Schlimmer refers to Aqua florum aurantii or Aqua naphae as a favorite flavoring agent. The oil contains a nitrogenous substance of exceeding fragrance, anthanilic acid methyl-ester.

برک نارنج

Leaves: Barg-i-nāranj (Isf.).

Field 429.

Among other uses, the leaves of the orange tree are applied to reduce swollen legs.—For this purpose they are sometimes mixed with *Taxus baccata* L., orange seeds, bitter cane, and hemlock fruits (H.F.).

خلال نارنج

Orange peel: Khalal-i-nāranj, Pust-i-utruj (Teh.); the peel or pericarp in thin shreds.

Field 153; W.H.M.M. 150804, 150896.

Orange peel is an ingredient in the preparation of tincture of cinchona and tincture of gentian. In domestic cookery in Iran it gives a flavor to boiled rice and other vegetables.

Post-i-nāranj is the fruit which, cut in two and dried in the sun, is sold in the bazaars.

هسته نارنج

Seeds: Hastah-i-nāranj (Teh.).

Field 431.

Orange seeds or pips are bitter. They are first torrefied to remove the husks, and are taken as a stimulating remedy.

Colchicum luteum Baker and **C. speciosum** Stev. (Liliaceae)

سورنجان کرمانی

Surinjān-i-kirmānī (Teh.); Surinjān-i-talkh (Pers.); Hermodactyl, "the finger of Hermes" (Gr.); the corms.

Achundow; Ph. Pers.; Boiss. 5: 155; Schl.; Ait.; Ph. Ind. 3: 496.

Field 14; W.H.M.M. 150857; K.B. 310.

The yellow-flowered *Colchicum* is found on grassy slopes in the temperate Himalayas, and in Afghanistan and Turkestan. *C. speciosum* Stev. is met with throughout the Badghis, Harirud, and Khorasan. The corms or bulbous roots are mixed with those of *Merendera persica* Boiss., which constitute the Hermodactyls of the later Greeks (Aitchison). The corms are ovate, 3.5 to 5 cm. long, white, hard, and horny. The starch is muller-shaped with a hilum. Both species afford the alkaloid, colchicine, and are used, as is *C. autumnale* in Europe, for rheumatism.—Powdered, they are given as an infusion for phthisis (H.F.).

Commiphora Molmol Engl. (Burseraceae)

خاک مقل

Khāk-i-mugl, Mun-e-makki (Teh.); Mur, Bol (Hind., Bom.); Myrrha mechensis (Ph. Pers.); oleo-gum-resin.

Abu Mansur; Schl.; Pharmacog. 125; Ait.; Ph. Ind. 1: 304.

Field 204; K.B. 310.

The fragrant oleo-gum-resin known as myrrh is one of the most ancient drugs in the Orient. It is obtained from plants growing in northeast Africa and South Arabia, and is brought to India, where Bombay is the center of the trade. Aitchison says it is imported into Meshed through Iran for further transport to Afghanistan and Turkestan. Myrrh is an important drug among Mohammedans, who suppose that it originally came from Mecca.—The sample from Tehran is in the form of grains; made into pills it is used as a stomachic and for lumbago. The dose is five pills (H.F.).

Commiphora Mukul Engl. (Burseraceae)

مقل ازراق

Muql-i-azrāq (Teh.); Moghl-ezregh (Schl.); Gugal, Bdellium (Hind.); Indian bdellium.

Ph. Pers.; Tschirch; Pharmacog.; Ph. Ind. 1: 311.

Field 245; W.H.M.M. 150703; K.B. 310.

The Mohammedans describe the different kinds of bdellium under the name of Muql (Mukul), and say that it is the product of a tree common in Arabia and India. Several kinds are distinguished, all of them bitter gum-resins. That with a bluish tinge is termed Muql-i-azrāq; with a yellowish tinge, Muql-i-yahud; brown, Sakulali;

and with a rich, red-brown color, Muql-i-abair. Sticky and bitter, the Irani samples form milky emulsions with water. The drug is given in muscular rheumatism and is applied to painful parts in the form of a "lep" or native plaster.—One misqal of the drug is given for insomnia (H.F.).

Commiphora opobalsamum Kunth (Burseraceae)

حب بلسان

Habb-i-balsān (Isf.); Hab-el-balasana, Akulla, Balasan (Ar.); balm of Gilead, balm of Mecca.

Field 445.

The fruits of this tree of Arabia are oval, pointed, wrinkled, reddish brown; the taste is balsamic, with an odor resembling that of turpentine. The fruits are carminative, stomachic, expectorant, and stimulant; in Isfahan, for shivering and colds, a few of the fruits are swallowed whole.

عود بلسان

'Ud-i-balsān (Isf.); wood.

Field 444.

The wood of the balsam tree, *Xylobalsamum* of Dioscorides, is pinkish and heavy in texture. It is found in pieces covered with layers of papery bark. The wood has properties similar to those of the fruit.

Conium maculatum L. (Umbelliferae)

بیخ شونکران

Bīkh-i-shankarān (Isf.); Karedemonah (Ham.); Kurdumana (Hind.); Karvaya-i-dashti (Pers.); Khorasain-ajwan (Ind. bazaars); conium or hemlock fruits.

Boiss. 2: 922; Ph. Ind. 2: 110.

Field 433; K.B. 311.

The hemlock is a poisonous plant distributed through Europe and northern Asia. Aitchison found the plant, fully 7 feet in height, in Karabakh. Arabian and Persian physicians repeat in their writings the opinion of the Greeks in regard to hemlock. The fruits and leaves contain a poisonous alkaloid, conine, which paralyzes the motor nerves. The fruits are used locally, in the form of a lotion, to allay pain.

Coptis Teeta Wall. (Ranunculaceae)

مامیران

Māmīrān (Teh.); the rhizome.

Field 156.

Mamiran is a drug known to the early Indian traders. Bernier, who visited Kashmir in the train of the Emperor Aurangzebe, mentions it as a medicine good for the eyes, which was brought into that country from Tibet. The plant is cultivated on the outskirts of virgin forests in the mountains of western China, and is sent to India by way of Singapore. The roots are thin, knotted rhizomes with a yellow interior. They contain the alkaloid, berberine, and are used as a collyrium, and as a general tonic.

Corchorus olitorius L. (Tiliaceae)

ملوغیه

Mulukhiyah (Iraq); Baphalli (Hind.); Rajajira, Isband (Bom.); Jew's mallow, jute, the seeds.

Field 55, 69, 71 (Iraq).

This species of jute was introduced from Egypt and is cultivated as a vegetable. The fiber, not being suitable for cordage, is extensively used in surgery as a cheap drainage material (Post). The seeds of the bitter *Corchorus* (*C. trilocularis*) were known to the Greeks. The seeds are dark bluish green, angular, 2 mm. long, and very bitter. An infusion is given in fevers and in cases of congested liver.

Cordia Myxa L. (Boraginaceae)

سپستان

Sepistān (Teh.); Sebestan or Sapistan, from Sagpistan, "dog's dugs" (Pers.); sebestan plums.

Achundow; Ph. Pers.; Schl.; Post 532; Boiss. 4: 124; Ait.; I.H.B.; Ph. Ind. 2: 518; *Cordia Myxa* and Allied Species, J. Hutchinson, Kew Bull., 1918, 217.

Field 11; W.H.M.M. 150724; K.B. 311.

Cordia Myxa L., the *Arbor glutinosa* of Rumphius, is a common shrub or small tree frequently cultivated and found in regions extending from Egypt to Indo-China and tropical Africa. Sebestan is a well-known drug in the Orient, introduced by the Arabs. It is a drupe the size of a cherry with mucilaginous properties. Aitchison says the fruits are imported chiefly from southern Iran to be employed

in medicine, and are forwarded in great quantities to Turkestan.—On account of their demulcent properties, they are useful for coughs and chest complaints; the dose in Tehran is said to be ten fruits (H.F.).

Coriandrum sativum L. (Umbelliferae)

تخم کشنیز

Tukhm-i-gishnīz (Teh.); Kuzbara (Ar., Iraq); Gashnish (Turk.); Dhanya (Hind.); Koriyan (Gr.); coriander fruits.

Achundow; Schl.; Laufer; Fl. Br. Ind. 2: 177; Ph. Ind. 2: 129.

Field 30, 33A; W.H.M.M. 150918; K.B. 311.

The coriander plant is cultivated in gardens throughout Iran, Afghanistan, and India. The globular fruits are a well-known spice and flavoring agent. The plant is used in salads and curries, and an infusion of the leaves is said to relieve headache.—The fruits are smoked to relieve toothache (H.F.).

Corylus Colurna L. (Cupuliferae)

فندق

Funduk (Teh.); Findaq, Bundaq (Iraq); Findak (Hind.); Indian or Constantinople hazel.

Field 66 (Iraq), 48A.

A tree of the northwestern Himalayas, Kashmir, and Afghanistan, this is a relative of the European hazel (*C. Avellana*). Its nuts are generally plentiful in the larger markets of Iran and are said to come from the north. Filberts or cobnuts contain a large quantity of sweet oil and are eaten either raw or roasted.

Cotoneaster nummularia Fisch. & Mey. (Rosaceae)

شیر خشت

Shīr Khisht, Khushk=dried (Teh.); Shir-milk, (Pers.); a saccharine exudation.

Field 126.

This is a common shrub on the Sia-Koh and Safed-Koh ranges, at an elevation of 3,000 feet and upward. It yields in certain seasons, from its smaller branches, white, sugary lumps of manna which are considered aperient and stomachic.—Mixed with water, it is considered a remedy for typhoid (H.F.). This is one of the four varieties of manna met with in Iran; the others are Tar-anjubin (*Alhagi camelorum* Fisch.), Gaz-anjabin (*Tamarix gallica* L.), and Shakr-ul-

ashar or Shakar tīqāl, the product of a beetle on *Echinops persicus* Stev.

Shīr Khisht is eaten as it comes from the shrub, with food, or converted into a sweetmeat; sometimes it is exported to India.

Crataegus orientalis Bieb. (Rosaceae)

کیک‌واش

Kaik-vāsh, Kawich (Isf.); Ghich (Ham.); Gaiwuzh (Turk.); Alafkhareg (Afg.); the fruits.

Schl.; Boiss. 2: 660; Post; Ait.; I.H.B.

K.B. 312.

The Oriental hawthorn is a shrub or small tree of Asia Minor or the Caucasus. The fruits of most species are used in medicine, and those grown in the gardens at Ba'quba, Iraq, fetch a good price in the local market. The berries from Hamadan are pome-like, rounded, 12 mm. across, with a reddish brown, wrinkled pericarp, surmounted by an umbilicate disk of the minute lobes of the calyx; within are three oval, light brown, hard pyrenes. The fruits contain sugar, and are supposed to act as an opiate, while the seeds are used as a medicine for spermatorrhea.

Crocus sativus L. (Iridaceae)

زعفران

Za'farān (Teh.); Zafran (Ar.); Karkum, Abir (Pers.); Kesar (Kash.); Kesara (Hind.); saffron, hay saffron.

Field 2; W.H.M.M. 150720.

The saffron plant is cultivated in the neighborhood of Pampur in Kashmir and was formerly cultivated in Isfahan. It was grown in the 10th century in Spain, where the bulk of the European saffron is now produced. The dried, red stigmas of the crocus are a favorite coloring matter in medicine and food. The drug has a stimulant and antispasmodic action.

Croton Tiglium L. (Euphorbiaceae)

حب السلاطين

Habb-el-salatin, "Sultan's seeds" (Ham.); Habb-el-khatai, "Cathay (China) seeds"; Bidend jireh khatai, "castor oil seeds from China"; Habb-dilmaluk (Ait.); Jamalgota (Punj.); croton seeds.

Ait.; Schl.; Ph. Ind. 3: 281.

K.B. 312.

This small tree, indigenous to China and northeastern India, is now under cultivation throughout the greater part of India and the East. Croton seeds were known to the Persians at an early date, and were doubtless introduced from China by the caravan route through Central Asia. Described by Acosta in 1578, they were called Piñones de Malaca. The seeds contain a violently purgative oil, and are classified by the Iranis among the poisons.

Cucumis sativus L. (Cucurbitaceae)

تخم خیار

Tukhm-i-khiyār (Teh.); Khira (Punj.); Lār (Kash.); Kira (Hind.); cucumber seeds.

Field 34; W.H.M.M. 150754.

Cucumber seeds are ovate, pointed at both ends, 12 by 5 mm., notched at the apex; the cotyledons are oily and sweet.

The seeds are a favorite nutritive and demulcent, resembling in action and uses the five cucurbitaceous seeds (see *Citrullus vulgaris* Schrad.). The therapeutic action of cucumber seeds, from a local point of view, must be considered as somewhat negative, since they may be "mixed with any medicine the doctor prescribes."—They are given as an infusion for typhoid (H.F.).

Cucurbita Pepo DC. (Cucurbitaceae)

گل کدو

Gul-i-kadū (Teh., Ham.); Shijar (Iraq); Kadu (Hind.); flowers of the pumpkin.

Ait.; Schl.; Fl. Br. Ind. 2: 622.

Field 214, 92A; W.H.M.M. 150891; K.B. 312.

The pumpkin is largely cultivated as a vegetable in Iran and Afghanistan. The flowers, chiefly yellow or orange corollas, are sold in the bazaars. Made into a decoction, they may be applied to the face "to improve the complexion"; they are also administered internally for chest complaints.

تخم کدو

Tukhm-i-kadū (Teh.); the seeds of the pumpkin.

Field 65; W.H.M.M. 150766.

The seeds are light colored, oval, 2 by 1 cm., smooth, with a marginal rim. Like the seeds of other members of the gourd family, they form a nutritive and palatable addition to ordinary diet.

Cuminum Cyminum L. (Umbelliferae)

زیره سبز

Zīrah-i-sabz (Isf., Iraq); Zira (Hind.); Jira (Beng., Bom.); Goi-zira, "green weed" (Turk. in Tabriz); Cummun (Syr.); the fruits.

Post 373; Gilliat-Smith & Turrill, Kew Bull. 1930, 390; Ph. Ind. 2: 113.

Field 438, 34A; W.H.M.M. 150792; K.B. 313.

The fruits of cumin are called green or white caraway to distinguish them from darker or black caraway (*Carum Bulbocastanum* Koch). The cumin plant is grown in gardens as a potherb, and the seeds, or properly fruits, are sold in the bazaars as a condiment and carminative medicine.—They are also prescribed to relieve pains after childbirth (H.F.). From the dawn of civilization in Egypt, its use spread into Arabia, Iran, India, and China.

Cupressus sempervirens L. (Coniferae)

گل سرو

Gul-i-sarv (Teh.); cypress fruits.

W.H.M.M. 150903.

The fruits of the cypress tree are reddish brown, opening by a five-parted covering, fragrant, and bitter. They contain an essential oil which has been recommended for whooping cough and as an anthelmintic.

Curcuma aromatica Salisb. (Zingiberaceae)

قرنباد

Qurunbād—this name is a corruption of Zurunbād (*Curcuma Zedoaria* Roxb.—(Teh.); Jangali-haladi (Hind.); wild turmeric, round or yellow zedoary tubers.

Field 146.

This is a contorted, yellow root, dressed with yellow powder, hard and orange brown within, having a delicate camphoraceous odor.—The powdered root is used for flatulence (H.F.).

Curcuma domestica Val. and **C. longa** Trim. (Zingiberaceae)

کرکم

Karkum, the Persian name for saffron (Teh.); Haldi (Hind.); Zard chobah, yellow root (Pers.); turmeric.

Field 73, 94; 73A, 74A.

These samples represent the rhizome and powdered root of turmeric. The root, called Indian saffron, is imported from India as a dye stuff, but is sometimes employed in Iran as a condiment. In medicine turmeric is a stimulant, tonic, and aromatic. Like other yellow roots, it is used in a decoction as a cooling lotion for conjunctivitis. Turmeric contains a yellow coloring matter, curcumin, and a thick, viscid oil.

Curcuma Zedoaria Roxb. and **C. Zerumbet** Roxb. (Zingiberaceae)

زرمباد

Zurunbād (Teh.); Kachura (Hind.); Uruk-el-kafur (Ar.); zedoary, long zedoary.

Field 148; W.H.M.M. 150910.

Zedoary is imported in quantity from India, most of it to be passed on to Turkestan. The root occurs in thin, transverse slices, 2 to 5 cm. in diameter, pale brown and wrinkled without, smooth and mealy within, odor camphoraceous, taste pungent and bitter. The drug, which is also employed as a condiment, is carminative and stimulant, and an ingredient in various alterative medicines.—It is recommended for relief of flatulence (H.F.).

Cuscuta planifolia Ten. and **C. hyalina** Roth (Convolvulaceae)

تخم کشوث

Tukhm-i-kushūth, Tukhm-i-kishvar, Resha-i-kishvar (Ham., Isf., Teh.); Gul-i-geshuz (Ham.); Kukil-i-pol, "moist silk" (Kash.); Aftīmūn, the herb; Kashūth is the Arabic name for dodder; Kassutha (Gr.); Cuscuta (Lat.), hence Keshus (Pers.); kill weed; seeds and flowers.

Boiss. 4: 117; Ph. Ind. 1: 548; Sci. Pa. 240.

Field 187, 226, 436, 437; W.H.M.M. 150734, 150782; K.B. 313.

Gul-i-keshus (the flowers) and Tukhm-i-keshus (the seeds) are exported from Iran to India mixed with the leaves and spines of the plants on which they grow. The seeds are light brown and have a bitter taste. The flowers are given for asthma—as an infusion, one cup, for catarrh (H.F.)—and for obesity the (thin, filamentous stems). The drug Aftīmūn, Epitymon (Gr.), is probably derived from *C. europaea*, a native of Europe and western Asia. It is given as a digestive and purifier of the blood, just as in Europe dodder is an ancient remedy for intestinal disorders such as constipation and flatulence.

—Dodder herb is given for rheumatism. Mixed with *Heracleum persicum* Desf. and gentian root, it is taken to stop excessive salivation (H.F.).

Cymbopogon Schoenanthus Spreng. (Gramineae)

اصفر مکی

Asfar-i-makkī, Azkar (Teh.); Iskhir (Ar.); Khavi (Hind.); Juncus odoratus; Herba Schoenanthi; camel grass.

Ph. Pers.; Schl.; Ph. Ind. 3: 557; Oil-grasses of India and Ceylon, by O. Stapf, Kew Bull., 1906, 297.

W.H.M.M. 150785; K.B. 313.

The drug sent under these names is intended to represent the Irani and Indian drug Ishkar or Izkhir-i-jami, the stem and root of fragrant grass introduced originally from Arabia. The drug consists of the lower parts of the leafy stem with a few wiry roots and has a lemon-like odor. Kämpfer in his travels in Persia in 1683–1688 speaks of the distillation of the oil from the grass Izkhir ("Amoen. Exot." 1712). Preparations of the grass are used locally for debility.

Cynara Scolymus L. (Compositae)

کنگر دهری

Kangar, Kangar-i-dahri (Isf., Teh.); Kinguere (Schl.); Ardi-shauki (Ar.); Anghinar (Turk.); artichoke seeds.

Achundow; Boiss. 3: 557.

Field 446; K.B. 314.

The artichoke is a cultivated plant in Iran. Its hard, white, polished fruits are used in medicine, and are said to be an antidote for opium poisoning. Kangar is a name applied in Iran to almost any thistle. Aitchison believes that it originated from the Persian name of an allied plant, prickly artichoke (*Gundulea Tournefortii* L.); this plant exudes an emetic resin (Kangar-zad) which is used medicinally.

Cyperus rotundus L. (Cyperaceae)

تا پالق

Tāpālaq (Teh.); So-ad (Ham.); Sa'ad (Iraq); Seid (Sud.); Motha (Hind.); Muschk-i-zemin, "earth musk"; Rad. Junci odorati (Ph. Pers.); Hsiang fu (Chin.); scented rush.

Achundow; Ph. Pers.; Ph. Ind. 3: 552.

Field 89A; W.H.M.M. 150755; K.B. 314.

The sedge grows plentifully in moist or boggy ground. The small, dark, hairy tubers are ovate-oblong, pointed at both ends, about 2.5 cm. or less in length, brown, hard, and horny. They have a fragrance resembling lemon and cardamom. These tubers are known in Asia for their perfume and medicinal properties; they are used for cleaning the teeth and are placed among clothes to keep away insects.

Datura Stramonium L. (Solanaceae)

تخم تاتورا

Tukhm-tātūrā (Pers.); Datura (Hind.); Jouj macel (Ar.); Shinah Azqhi (Bal.); stramonium thorn apple.

Ait.; Ph. Ind. 2: 586; Y.B. Pharm. 1927, 49; Synopsis of Genus Datura, W. E. Safford, Journ. Wash. Acad. Sci., 19 Apr. 1921.

K.B. 314.

The thorn apple grows in North, Central, and South America, and was introduced at a very early date into the warm regions of Europe, Asia, and Africa. This species is a weed in Iran, and the name has been borrowed from other countries. Specimens of the seeds came from Tehran and Hamadan and the leaves from Hamadan. Both seeds and leaves are used as poultices to allay pain. The natives recognize the poisonous properties of the seeds and sometimes call them Kachola, the name for the seeds of nux vomica, as both are used for killing dogs.

Daucus Carota L. (Umbelliferae)

تخم هویج

Tukhm-i-havīj, Tukhm zardak (Teh.); Jazr-ul-bostani (Ar.); Jazar, Gaizar (Iraq); Gajur (Hind.); Hawuch (Turk.); carrot fruits.

Field 120A, 203; W.H.M.M. 150887.

The carrot is greatly valued as a vegetable and much cultivated. The fruits are dull brown, oval, and compressed, the surface is rugose, marked with ridges which are distinctly winged, and the wings fringed with white teeth or bristles. The taste is balsamic, bitter, and oily. The fruit is stimulant, laxative, emollient, diuretic, and emmenagogue.

Delphinium Zalil Ait. & Hemsl. (Ranunculaceae)

اسپرگ

Isparak (Teh.); Asbarg, Aswarg, Zalil (other parts of Iran); Hishwarg (Bal.); flowers of yellow larkspur.

Field 36.

The yellow larkspur is a perennial herb in desert regions of Iran and Iraq, with shoots 2 feet high, each bearing a terminal spike of yellow flowers. The dried petals are of commercial importance, yielding a valuable yellow dye for silk, and are exported for this purpose in large quantities to Turkestan, Afghanistan, and even to India, where the flowers, to a small extent, are employed in medicine.

Dolichos Lablab L. (Leguminosae)

لوبیاکل

Lūbiyā-gul (Teh.); Sim (Hind.); Simbi (Sans.); kidney bean.

Field 99.

This is a climbing perennial, or, under cultivation, an annual, common in India, where the seeds, which vary much in form and color, are employed as food. The beans from Tehran are black and brown, 15 by 10 mm., with a white hilum.

Dorema Ammoniacum Don (Umbelliferae)

وشا

Vashā (Teh.); Ushna ushek (Pers.); Kandal (Afg.); Samagh Hamama (Hind.); gum ammoniacum.

W.H.M.M. 150769.

The plant yielding this exudation is found in the desert regions of Afghanistan and Iran. The light colored gum-resin occurs in rounded tears, agglutinated masses, or cakes; it breaks with an opaque, shining or yellow conchoidal fracture, forming a milky emulsion with water. The drug has a faint, peculiar odor, and a bitter, nauseous taste. The gum is stimulating, expectorant, and laxative. Externally it acts as a resolvent, and is used as a plaster in asthmatic cases, and for indolent tumors and glandular swellings.

Doronicum Pardalianches L. (Compositae)

درونج اقربی

Darūnaj-i-akrabī (Teh., Ham.); Darvunedge eghrebi (Schl.); Doronic (Gr.); Doronicum Graeci (Ph. Pers.); doronicum root.

Achundow; Boiss. 3: 379; Makhjan-el-Adwiya; Ph. Ind. 2: 292; Kew Museum.

Field 168; K.B. 315.

This ancient drug is said to have come originally from Greece and Syria. *D. scorpioides* Lam. affords some supplies of the drug,

while *D. Falconeri* C.B.Cl., of the Himalayan region, has been identified as the origin of samples of the drug in India. It is a peculiar, knotted root, like the tail of a scorpion, and white, like alabaster. It contains inulin instead of starch, and is acrid and bitter. In Iran it is regarded as poisonous. It is useful in nervous depression, and is prescribed, according to the "Doctrine of Signatures," for persons bitten by scorpions and insects.

Dracaena Cinnabari Balf. (Liliaceae)

خون سیاوش

Khūn-i-siyāvash (Isf.); Dam-el-akhwain (Ar.); Hira dukhi (Hind.); dragon's-blood resin.

Field 428.

Dragon's-blood is obtained from the isle of Socotra and Zanzibar, and is imported into India through Bombay. The resin, which exudes spontaneously from the ripening fruits, occurs in tears, the surfaces of which are covered by a dull red powder. When broken, the surface is glassy, translucent, and of a beautiful garnet color. The resin is soluble in spirit and is employed for coloring varnishes. In medicine, the resin is astringent, and is used to stop hemorrhage. Iranis make a paste of the powdered resin and water, which is applied to relieve pains in the legs and feet.

Dracocephalum Moldavica L. (Labiatae)

باد رنجه بویه

Bād-i-ranjah būyah (Teh.); Badrish-bu (Tab.); Badrendj-bouyih (Schl.); the Persian name means "the scented remedy for flatulent colic"; the herb and seeds.

Achundow; Boiss. 4: 672; Ait.; Schl.; Ph. Ind. 3: 117; Cowan (Teh.); Gilliat-Smith (Tab.).

Field 198; K.B. 315.

Bād-i-ranjah būyah is an important drug in Iran, and has been variously referred to species of *Nepeta, Calaminta,* and *Melissa,* plants having the odor of balm. From Tabriz Gilliat-Smith sent seeds of the above mentioned species of *Dracocephalum* under the same vernacular name, thus confirming the identification of Schlimmer in 1874. The seeds are black, somewhat torpedo-shaped, 2 mm. long, with a white, V-shaped mark at the pointed end. They afford an opaque mucilage when soaked in water, and are used as a carminative and tonic. For another source of the drug see *Asperugo.*

Echinops persicus Stev. (Compositae)

شکر تیقال

Shakar tīqāl, "sugar of nests" (Teh.); Gol tighol of Royle; Tréhala manna.

Ph. Pers., 1681, 361; D. Hanbury, Journ. Linn. Soc., 16 Dec. 1858; Sci. Pa. 158–164; Schl.; Apping, 1885; Ebert, 1909; Tschirch, 1912.

Field 38, 32A; W.H.M.M. 150892; K.B. 315.

Tréhala is a sweet substance forming the cocoons of a beetle, occurring on the leaves and stalks of species of *Echinops* found in Iran, Turkey, and the Caucasus. The beetle is *Larinus maculatus* Fald. (Guldigul, Pers.), one of the Curculionideae. This insect forms a rough, chalky-looking nidus or cocoon, rounded-oval, 18 to 20 mm. long, yellowish white, rough on the outside and smooth within. The cocoon contains 15 to 23 per cent of a sugar identical with mycose. This peculiar secretion, known since the time of Avicenna, and described in "Pharmacopoeia Persica" (1681), is given for coughs and to relieve the respiratory organs.

Echium amoenum Fisch. & Mey. and other spp. (Boraginaceae)

گل گاو زبان

Gul-i-gāv-zabān (Teh.); the Persian name means "flowers of oxtongue"; flowers of borage.

Field 9, 30A; W.H.M.M. 150900; K.B. 316.

The drug under this name has been supplied by *Caccinia glauca* Savi and *Onosma macrocephala*. Schlimmer refers the drug to *Anchusa italica* and *A. hybrida*, and Dymock to *Trichodesma molle* DC. In Baluchistan the flowers are supplied by *T. indicum* R. Br., and in Sind by *T. zeylanicum*. It thus appears that Gul-i-gāv-zabān is a generic name applied to the blue flowers of several plants of the borage family. The blue corollas are 3 cm. long and 12 mm. wide at the throat, and funnel-shaped. They are considered to be a good cardiac, tonic, and demulcent.

Echium sericeum Vahl (Boraginaceae)

برگ گاو زبان

Barg-i-gāv-zabān, "leaves of oxtongue" (Teh.); leaves of borage.

Field 225; W.H.M.M. 150764.

This sample is a mixture of leaves, stems, and flowers of the above plant. Other species of *Echium* are occasionally supplied. It is

said to be a tonic medicine and useful as an application for rheumatism and snake bites.

Elettaria Cardamomum Maton. (Zingiberaceae)

هل

Hil (Iraq); Arak or Erok Hail (Bagh.); Ilachi (Hind.): cardamom fruits.

Field 38A, 59 (Iraq).

There are two kinds of cardamoms sold in Iran and Iraq: the small or Malabar cardamom from the above plant, and the great or Nepal cardamom from *Amomum subulatum* Roxb. (q.v.). They are both imported, but the first kind is occasionally cultivated in Iraq in shaded gardens. As a masticatory and for flavoring food, as in curry, the Malabar or small cardamom is preferred by the natives, but the other kind, which is cheaper and of less delicate flavor, is used largely by sweetmeat makers.

Embelia Ribes Burm. (Myrsinaceae)

برنج کابلی

Birinj-i-kābulī (Teh., Isf.); Berengue Kaboli (Schl.); Baberang (Hind.); the fruits, Embely currants.

Fl. Br. Ind. 3: 513; Schl.; Ph. Ind. 2: 349.

Field 419; K.B. 316.

This shrub grows throughout India, where the berries have long been known as a medicine. Susruta described the anthelmintic properties of the fruits, which were given the Sanskrit name Vrishanasana, "destroyer of enemy (worm)." The drug is referred to in all Mohammedan works of medicine, and its value in removing tapeworm (*Taenia*) in children and adults has been abundantly confirmed. The fruits are globular, dull red, with a 5-parted calyx, and stalked. The outer shell is striated from base to apex, the seed is horny and embedded in reddish brown afflorescence. In 1888 Warden separated the crystalline active principle, embelic acid. Brissemoret in 1907 showed this substance to be an oxyquinone.

Entada gigas (L.) Fawc. & Rendle (Leguminosae)

قرس کمر

Qurs-i-kamar, "nuts for loins" (Teh.); Gila (Beng.); Garabi (Hind.); the seeds.

Field 47.

This plant is a gigantic shrub, remarkable for its legumes, which are several feet long. It has been called Burmese tamarind. The seeds are more or less heart-shaped, flattened, about 2 inches in diameter, with a shining, brown surface. They are used by some hill tribes for washing the hair, as they contain saponin. Aitchison remarks that Kors-i-kamar seeds are exported from India to Iran and employed in medicine. In Tehran they are powdered and, mixed with yolk of egg, made into a plaster for pain in the back.

Equisetum ramosissimum Desf. (Equisetaceae)

قنطریون

Qantaryūn (Teh.); the herb, horsetail.

W.H.M.M. 150859.

The light green stalks of the horsetail with their brittle structure and acute edges appear by some mistake to have been intended to represent the centaury plant (*Erythraea Centaurium* Pers., Gentianaceae). They could not replace the pleasantly bitter centaury herb. *Dianthus anatolicus* Boiss. is called Kanturiyan in Iran, where it is also used as a substitute for the centaury of the European flora. The centaury, like other plants of the gentian family, is a domestic remedy for a general tonic.

Eremurus Aucherianus Boiss. (Liliaceae)

سریش سفید

Sirīsh-i-safīd (Isf., Teh.); commercial names: chiresh, sarish, siris, shirias; roots of the giant asphodel.

Field 1, 2 (Isf.); 80A, 240.

The roots of one or more species of asphodel, including *Asphodelus ramosus* L., are found in commerce in Iran and Central Asia, and are trade products in Mosul and Leh, either dried entire or powdered (Sirish-i-narm). They are exported from the Balad Sinjar district in northwestern Iraq to Syria (G.). The roots, whitish, twisted, hard, light brown, swell and soften and partly dissolve in water, forming a thick mucilage. Water added to the powder forms a glue used for cementing leather, in binding books, and for other industrial purposes. The green part of the plant is eaten.

Erysimum repandum L. (Cruciferae)

تخم خاک شیر

Tukhm-i-khāk-i-shīr (Ham.); Khakshir-talkh (Isf.); Khakechi (Schl.); Khubah (Ar.); Kashir (Bal.); the seeds.

Achundow; Ait.; Schl.; Boiss. 1: 189; Fl. Br. Ind. 1: 153; I.H.B. Field 150; K.B. 317.

This small, annual herb, hoary with close, appressed hairs, is frequent in Kashmir and Iran, and westward to Europe and West Africa. The seeds, with those of *Sisymbrium Sophia* L. and *S. Irio*, are exported into India from Iran under the name of Khākshīr. They are small, oblong, 1 mm. long, reddish or yellowish brown, smooth, and shining (not dull like those of *S. Sophia*). When placed in water, they become coated with transparent mucilage. The kernel is yellowish and oily and has the flavor of mustard. The seeds are given in fever and, in the form of a poultice, are used to relieve stomach pains.—They are often smoked to relieve eye diseases (H.F.).

Eugenia aromatica Baill. (Myrtaceae)

قرنفل

Qaranful, Qaranful-asward (Iraq); Karanaphal (Ar.); Laung (Hind.); cloves, the flower buds.

Field 43 (Iraq), 69A, 70A, 102.

Cloves, the well-known spice, consisting of the flower buds of a tree originally belonging to the Moluccas, are sold in all bazaars in the East. In modern medicine, cloves are used as a carminative and stimulant to relieve irritation of the throat, and the oil to relieve the pain of toothache. The oil, which is the most important constituent of cloves, is obtainable to the extent of 16 to 20 per cent. It is a mixture of a terpene and an oxygenated oil called eugenol.

Ferula galbaniflua Boiss. (Umbelliferae)

باریجه

Bārījah, Bariz, Rish-shar, Gavshira (Teh.); jāv or gāv means a cow, and shīr, milk; in allusion to the milky nature of the juice; gum galbanum.

Boiss. 2: 988; Schl. 295; Laufer 363; Ait.; Ph. Ind. 2: 152.

Field 131, 135; W.H.M.M. 150797; K.B. 317.

The galbanum plant is found in moist localities, as in the Badghis near Gulvan, where it grows in sandy soil. The stem is thick at the base, tapering suddenly and reaching a height of 4 feet. The stem, on injury, yields an orange yellow juice, which slowly consolidates into tears, and has a strong odor of celery. The sample from Tehran is said to have come from Kurdistan or Māzanderān. Galbanum is taken internally as a stomachic. Externally it is applied

as a plaster to sores and wounds. The drug contains resin 65, gum 20, and essential oil 10 to 20 per cent.

Ferula persica Willd. (Umbelliferae)

سکبینج

Sakbīnaj (Teh.); Saka-binaja (Ar.); Sek binedge (Schl.); Sagapenum gum.

Achundow; Ait.; Schl.; Laufer 366; Ph. Ind. 2: 161.

Field 163; K.B. 317; W.H.M.M. 150922.

Sagapenum is a fragrant gum-resin obtained from Laristan and Kerman. It is found in the market in tears or agglutinated into brownish yellow cakes with a persistent, alliaceous odor and acrid taste. It yields on distillation a volatile oil containing sulphur.

The drug has a local reputation as a plaster for rheumatism and lumbago.—Mixed with linseed oil it forms a salve for the relief of piles and pains in the back (H.F.).

Ferula Sumbul Hook. f. (Umbelliferae)

ریشه کلفس

Rīshah-i-kalafs, Sumbul, also the name for celery root (Teh.); musk or violet root.

Field 134.

This is a large, perennial plant of Samarkand. The root is thick and fusiform, light and spongy, transversely wrinkled, with corky, brown bark, and fibrous, whitish interior with resinous cells. The odor is strong and musk-like, and the taste bitter and aromatic. It is employed as a stimulant, nervine tonic, and antispasmodic, given in hysteria and nervous disorders.

Ficus Carica L. (Moraceae)

تین

Tin; common fig.

The edible fig grows wild in the mountain valleys of Kurdistan and in the foothills, and is also cultivated throughout Iraq as a fruit tree (G.).—The figs are usually sold strung on cords hung from the ceiling (H.F.).

Foeniculum vulgare Mill. (Umbelliferae)

ریشه رازیانه

Rīshah-i-rāziyānah (Teh.); the root of fennel.

بادیان سبز

Bādiyān-i-sabz, Tukhm-i-rāziyānah (Teh., Ham.); Badyan (Afg.); the fruits of fennel.

Post 356; Schl.; Ph. Ind. 2: 124; On the Commercial Varieties of Fennel, J. C. Umney, Pharm. Journ. 58 (1897) 225; I.H.B.

Field 16, 55A, 233, 413; W.H.M.M. 150771; K.B. 318.

Fennel is a stately, umbelliferous plant cultivated for its fruits in several parts of Europe and Asia. The fruits are frequently, in the bazaars, confounded with aniseed (*Pimpinella Anisum* L.), the Persian name for which is Badian, and Bādiyān-i-sabz is usually applied to fennel fruits. The taste is sweet and aromatic, and the fruits contain from 3 to 5 per cent of essential oil with anethol as the principal ingredient. J. C. Umney found the odor of Irani fennel nearer to anise than any other variety of fruit examined, the percentage of anethol being higher and fenchone comparatively low. Fennel is valued as a condiment and enters into mixtures given for dysentery and colds.

The root of the fennel plant is a rather important medicine in native practices, being to the present day esteemed as one of the five "opening roots" of the ancients, the other four being parsley, celery, asparagus, and butcher's broom.—Fennel roots, with *Carum copticum* Benth. & Hook., are given as an infusion for flatus; and alone as an infusion for toothache and to relieve pains following childbirth (H.F.).

Fritillaria imperialis L. (Liliaceae)

گل سر نگون

Gul-i-sarnigūn (Teh.), "the bulbs of the topsy-turvy"; "the tubers of a plant, the flowers of which, according to the natives, hang upside down, considered rare in Afghanistan and highly valued as a medicine" (Aitchison). Another Persian name for this plant is Gul-i-shirper, "flowers of six feathers."

Boiss. 5: 189; Ph. Ind. 3: 498.

Field 178, 189; W.H.M.M. 150882; K.B. 318.

Crown imperial is common on the mountain slopes of Kurdistan. The drug consists of broken pieces of thick, whitish corms, without odor or taste. The starch is oval and regular. A toxic alkaloid has been separated from them by Fragner (1888). The corms of this plant are valued as a medicine in the Far East, chiefly for chest complaints and toothache. Regarding the Irani drug, it is said,

"When a woman has a child, a paste is made from it and put on the stomache to reduce pain" (C.).

Fumaria parviflora Lam. (Fumariaceae)

شاتره

Shātarrah (Teh., Isf.); Tukhm-i-shātarrah (Ham.); Shahtarrah, "royal herb"; Tarrah, "potherb" (Pers.); the plant.

Achundow; Schl.; Boiss. 1: 135; Fl. Br. Ind. 1: 128; I.H.B.; Ph. Ind. 1: 114.

Field 13 (Isf.), 406, 426; W.H.M.M. 150770; K.B. 318.

The fumitories are medicinal herbs employed throughout India, Afghanistan, and Baluchistan. The herb and fruits are both used. The herb occurs in broken fragments of stems and leaves with a slightly acid and astringent taste. The fruits are green, globular, the size of a pinhead, apiculate, rugulose on the surface, and one-seeded. They have scarcely any odor and the taste is slightly acrid and astringent. The plant contains fumaric acid and the alkaloid fumarine. Shātarrah is highly esteemed by Mohammedans in India; it is said to purify the blood and act as a laxative and diuretic. —In Iran it is prepared like tea to relieve pains in the back in pregnancy (H.F.).

Fungi, see *Agaric* and *Polyporus officinalis.*

Gentiana lutea L. (Gentianaceae)

جوتیانا

Jūtiyānā (Isf.); Juntiyana (Duk.); gentian root.

Field 435.

European gentian root is prescribed with the fragrant fruits of the cow-parsnip to correct its bitterness. The root of *Gentiana Olivieri* Griseb., growing on the mountains in western Iran, is occasionally met with in the bazaars, and represents the Eastern gentian.

Glossostemon Bruguieri Desf. (Sterculiaceae)

بوقناق

Būqnāq (Teh.); Erok orab kuzzi (Iraq); Arab qosi (Turk.); Mughat (Egy.); the root.

Field 83A; W.H.M.M. 150747.

This is a large, cabbage-like, perennial herb with broad leaves and small, reddish brown flowers. The root is sold in the bazaars of

Egypt and Baghdad in a powdered form and employed by Coptic and Arabian women as a strengthening medicine. Before 1914 it was exported in considerable quantities, chiefly to Egypt, as an aphrodisiac. A decoction of the root is sometimes used at Baghdad as a cough cure (G.).

Glycyrrhiza glabra L. (Leguminosae)

ریشه اصل سوس

Rīshah-i-asl-i-sūs (Teh.); Bekh-sus; the root.

رب سوس

Rubb-i-sūs, Asal-alsus; the sweet extract; licorice.

Achundow; Ait.; Boiss. 2: 202; Post 277; Schl.; Ph. Ind. 1: 491. Field 243, 259; K.B. 319.

The licorice plant is a characteristic and common shrub in the Badghis and Khorasan at an altitude of about 2,000 feet, and occurs also in Baluchistan. The annual shoots grow to 4 feet from enormous underground rootstalks, which are sometimes used as fuel. The nomads at Yezd prepare an extract from these roots. India obtains market supplies of the root and extract from Iran and Sind; it has been suggested that the plant might be cultivated in the North-Western Frontier Province. Throughout Asia, licorice root and its extract, from time immemorial, have been used for cough and chest complaints.

—Licorice root is also given to relieve acute indigestion from eating fruit (H.F.). The plant is said to yield an aphrodisiac (G.).

Gossypium sp. (Malvaceae)

قطن

Cotton (Qutn, Ar.) is the hair-like cells clothing the seeds of the cotton plant. Specimens of cotton and seeds presented to Field Museum by the Rustam Agricultural Experimental Farm at Hinaidi, Iraq, are:

G. herbaceum L. Iraqi or Indian cotton (Qutn Iraqi); probably indigenous or at least cultivated for many centuries. (Field 6A.)

G. barbadense L. Sea Island cotton. (Field 2A.)

G. hirsutum L. "Mesowhite" (Qutn Amrikani). A derivative of the long-staple American upland cotton. (Field 38 [Iraq]; 8A, 10A, 13A.)

G. mexicanum Tod. Mexican cotton introduced into India in 1804. The seeds yield a copious, woolly floss. (Field 13 [Iraq]; 1A.)

At Rustam Farm the following varieties of cotton are also grown:

(*a*) Rustam No. 65. Field 3A. Origin Iraq.

(*b*) Rustam No. 124. Field 5A, 9A. Origin Punjab, India.

(*c*) Mosul White. Field 4A. Origin Mosul, Iraq.

(*d*) *G. peruvianum*. Ish-hony. Field 11A, 12A. Origin Egypt.

(*e*) Rustam No. 138. Field 7A. Origin Acala.

Guest (p. 39) records the following information: "*Gossypium* (Malvaceae). Cotton. Qutn (Ar.), Pambuq (Turk.), Lukah (Kurd.), Pambu (Kurd.).

"Iraqi or Indian Cotton, *G. herbaceum* L. (Qutn Iraqi), a well-known, short-stapled type, is probably indigenous or has at least been cultivated in Iraq for many centuries. It is still grown to some extent as a summer crop, especially on the northern plains where springs or streams provide irrigation water. The lint is used chiefly for stuffing. It is the local practice to pick this type of cotton with the boll intact, the dry boll and other rubbish being removed later.

"After the War the Department of Agriculture tried many foreign varieties of cotton and eventually issued seed of 'Meso-white,' a derivative of the long-stapled American Upland cotton, *G. hirsutum* L. (Qutn Amrikani). A ginnery was erected by the British Cotton Growing Association, who did much to encourage this crop. The cultivation of Mesowhite cotton as an irrigated summer crop rapidly became popular in lower Iraq and after ten years (in 1928) the annual export of cotton exceeded 5,000 bales of 400 pounds each. Since that year the size of the crop has fallen off very rapidly, chiefly owing to the slump in world prices which has discouraged the local farmers. In 1932 the export of bales of cotton from Iraq amounted to only about four hundred. One or two other varieties of American cotton, such as Acala, have done well in trials at Rustam Farm; this is a cotton inferior to Mesowhite but gives a higher yield and ginning percentage.

"Egyptian cottons (Qutn Misri) have also been tried but have not proved successful under local conditions."

Gypsophila paniculata L. (Caryophyllaceae)

الصابونيه

El-sābūniyeh (Ar.); Zuleh (Ham.); Saosafid, Bekh (Ait.); Kundur, Kundusch (Achundow); soap-root.

Ait.; Post; Boiss. 1: 542; Ph. Ind. 1:155.

K.B. 319.

This is a shrubby plant of northern Iran, Afghanistan, the Caucasus, and Turkestan, 3 to 4 feet high, with numerous stems springing from the perennial rootstock. The underground rootstocks are collected and used as soap for washing the hair and clothes. The Irani drug is no doubt a substitute for the older Roman and Egyptian Struthium, the root of *G. Struthium* L. of southern Europe. The roots contain from 6 to 16 per cent saponin.

Halimodendron argenteum Fisch. (Leguminosae)

Field 14, 31 (Iraq).

Halimodendron is a thorny shrub found in Iran, the Caucasus, and Central Asia. Fruits of this plant were collected without a local name, from Yezd-i-Khast between Isfahan and Shiraz. The thorns are used in native surgical operations. Inflated pods, 2 cm. long and oblique, are brown, and contain two or three seeds like chick peas.

Helianthus annuus L. (Compositae)

افتاب کردن

Aftāb gardan (Teh.); Ward-ash-shams, Shams-wa-qamar (Iraq); Qunah baqan (Turk.); sunflower seeds.

Field 122 (Teh.), 72, 73 (Iraq).

Two kinds of sunflower seeds are represented in these collections: black, ovate-elongate, 12 by 6 mm.; and white, smooth, broader achenes, 12 by 7 mm. There is a good market for these seeds, which are used for human consumption and for bird food, and yield by expression an oil for cooking purposes. Many tons of the seeds are produced annually in the U.S.S.R.

Helicteres Isora L. (Sterculiaceae)

بهمن پیچ

Bahman-i-pīch, Pachman-i-puh (Teh.); Kisht bar Kisht (Pers.); Pechak, Marorphali (Hind.); Avartin (Sans.); the Persian and Sanskrit names signify the furrows on a ploughed field; the spiral fruits.

Ibn Baitar; Achundow; Fl. Br. Ind. 1: 365; Ph. Ind. 1: 231.

Field 137; K.B. 320.

The East Indian screw tree occurs in dry forests throughout central and western India and in Ceylon, Java, and northern Australia. The spirally curved fruits are sold in all Indian bazaars and

in more northern countries. The fruit is composed of fine, slender, angular carpels twisted like corkscrews, which together form a cone 3.5 to 5 cm. long. The carpels are pubescent and greenish brown, and each one contains a single row of dark brown, angular seeds.

The drug has demulcent and slightly astringent properties, and is employed as a medicine for dysentery and for griping of bowels and flatulence in children.

Heracleum persicum Desf. (Umbelliferae)

گل سپر

Gul-i-sipar (Teh.); Gul-i-parr (Isf.); Goleper (Kerm.); Giafari (Schl.); the fruits.

Schl.; Post; Boiss. 2: 1044.

Field 434; W.H.M.M. 150779; K.B. 320.

This species of cow parsnip is indigenous to the moist valleys of the Elburz Mountains, and is related to *H. pubescens* M.B., of a wider range. Boissier refers the plant Goulpere to *H. lasiopetalum*. The fruits, which are sold as a spice and used in pickles, are ovate-oblong, villous on the back, the margin aculeate, the dorsal vittae thick and clavate, reaching to two-thirds the length of the mericarp. While some of these plants are used medicinally and for food, other species in America and Europe are poisonous and produce erysipelatous inflammation (Cormerin, "Des Plantes Vénéneuses," 1887).

Hibiscus cannabinus L. (Malvaceae)

جل جل

Jiljil (Iraq); Hab-el-zalim (Ar.); Palsan (Hind.); Ambari (Duk.); the seeds.

Field 61 (Iraq).

The Deccan hemp plant is grown in western India and the tropics. The seeds are dull grayish brown, triangular or kidney-shaped, 5 by 3 mm. They contain an oil useful for culinary and lubricating purposes. The seeds are used in medicine and as cattle food.

—*H. Trionum* L., Qunnab, called Jiljil near Basra, yields a bast fiber resembling that of the Deccan (H.F.).

Holarrhena antidysenterica Wall. (Apocynaceae)

میوه زبان گنجشک

Mīvah-i-zabān-i-gunjishk, Tukhm-zabān-i-gunjishk-i-talkh, "the seeds of the bitter sparrow's tongue" (Pers.); Lizan ul asafir (Achundow); Indrajaou (Hind.); Estrefanthus; the seeds.

Ph. Ind. 2: 392; Pyman, Journ. Chem. Soc. 1919; Fl. Br. Ind. 3: 645.

W.H.M.M. 150793; K.B. 320.

This small, deciduous tree is found in the tropical Himalayas from the Chenab westward, and throughout the drier forests of India to Travancore and Malacca. Samples of the seed came from Hamadan and Tehran, showing that the Indian drug is well established in Iran. The seeds are narrowly linear-oblong, glabrous, and brown, about 12 mm. long. They have a bitter taste due to the presence of the alkaloid wrightine (conessine), which acts like emetine. The seeds are reputed to have tonic and aphrodisiac properties.

Hordeum vulgare L. (Gramineae)

جو سفید جو سیاه

Jau, Jōyi safīd (white), Jōyi siyāh (black) (Iraq); Jao (Sind); Jū (Kurd.); Jav (Hind.); barley.

Field 59, 71, 275; 11, 32, 44, 46, 70 (Iraq).

Barley is the most widely cultivated grain and forage crop throughout Iraq. The variety *hexastichon*, or six-rowed barley, has been found in the earliest Egyptian monuments and is the variety most frequently grown in India and Iraq. Early sown barley provides the greater part of the winter grazing in the irrigated areas; horses and other animals are also fed on the grain. Local barleys yield well, but are generally unsuitable for malting. The collection includes specimens of white and black barley, the varieties *distichon*, *hexastichon*, and *erectum*, and the Alleidum barley of Iraq. Pearl barley is imported from Europe and is obtainable in most Eastern bazaars. Mason quotes a saying in Iran, "What has disease to do with men who live upon barley-bread and buttermilk?"

Guest (p. 46) gives the following information concerning barley:

"*Hordeum* (Gramineae). Barley grass, Barley. Sha'ir, etc.

"*H. murinum* L., Wall Barley or Barley grass. Sha'irah, Shuwairib, Sha'ur, etc. Small tufted annual grass with a flattened inflorescence like a miniature barley. Widely distributed in fields, on channels and ditches, by waysides and in waste places. March–April. In maturity it is a fodder plant of rather low feeding value, though the young growth is nutritious. The seeds are barbed and the awns serrated; hence the mature plants are likely to injure the tender parts of stock.

"*H. bulbosum* L. Abu Suwaif, Gizar Gia (Kurd.), etc. A tall perennial barley grass with a bulbous root. A common weed in cereal fields on the upper plains and in the valleys of Kurdistan, often projecting conspicuously above the ears of the crop. March–May. It is a useful fodder plant sometimes preserved for winter feeding. Children often eat the bulbous roots.

"*H. spontaneum* K. Koch. Tall grass similar to the above. Common on the rocky slopes of Jebel Sinjar and other hills. April–May.

"*H. sativum* Pers. (*H. vulgare* L.). Sha'īr, Arpā (Turk.), Jū (Kurd.). The most widely cultivated grain and forage crop throughout Iraq; with wheat, rice, and dates it forms the staple food of the majority of the inhabitants. Early-sown barley provides the greater part of the winter grazing in the irrigated areas; horses and other animals are also fed on the grain. The climate is unfavorable for the slow ripening which is necessary to produce good malting barley, since the summer comes on very suddenly, almost before the spring is over. Two-rowed barley (var. *distichon*) is generally known as Sha'īr Abū Sūwaif or Sha'īr Abū Sikkatain; six-rowed barley (var. *hexastichon*) as Sha'īr Sparqalān."

—In the collections of the Rustam Agricultural Experimental Farm at Hinaidi near Baghdad, Iraq, the following varieties of barley are represented:

(*a*) *H. sativum* dest. erect., *nigrum*. Sha'īr Abū Sūwaif. Rustam No. 127. Field 23A. Origin Al Mahmudiya, Iraq.

(*b*) *H. sativum* Pers. (*H. vulgare* L.) *albidum*. Rustam No. 128. Field 24A. Origin Biskra.

(*c*) *H sativum distichon*. Chilian barley. Rustam No. 160. Field 25A. Origin Australia.

(*d*) *H. hexastichon albidum*. Circlan barley. Rustam No. 217. Field 22A. Origin Iraq.

(*e*) *H. sativum albidum*. California barley. Rustam No. 150. Field 20A.

(*f*) *H. sativum albidum*. Sha'īr. Rustam No. 218. Field 21A. Origin Iraq. (H.F.)

Hyoscyamus reticulatus L. (Solanaceae)

بزر بنج

Bazr-i-banj (Teh., Ham.); Kohi bang (Bal.); Banj barri (Iraq); Benj (Ar.); Bango (Port.); henbane seeds.

Ait.; Boiss. 4: 295; Schl.; Post; Ph. Ind. 2: 626.

Field 217; K.B. 321.

This species of *Hyoscyamus*, as well as *H. muticus* L. and *H. pusillus* L., is found wild in Iran and Syria. Aitchison observed that goats and sheep grazed on henbane plants without apparently bad effects, and the shepherds did not look upon these plants as poisonous. The seeds, however, are regarded by native physicians to be as poisonous as opium; they are exported from Iran to India. Henbane seeds are reniform, laterally compressed, grayish brown, with the testa finely reticulated. The taste is oily, bitter, and acrid; they contain the poisonous alkaloid, hyoscyamine.—The smoke of the seed is inhaled for toothache (H.F.).

Hyssopus officinalis L. var. **angustifolia** Boiss. (Labiatae)

گل پونه

Gul-i-pūnah (Teh.); Zupha-e-yabis (Ar.); Jupha (Hind.); hyssop, the herb.

W.H.M.M. 150723.

The true hyssop is a small, aromatic plant of Iran, Sind, and southern Europe. It is from 6 to 10 inches high, with a slender, square stem, hairy flowers in oblong spikes, of a brownish or bluish purple color and with the odor of hay. The seeds are oblong, three-angled, dark brown mottled with a red tint. The plant is given as a stimulant, carminative, and diaphoretic.

Illicium verum Hook. f. (Magnoliaceae)

بادنجان خطائی

Bādiyān-i-khatā'i, "anise of China" (Pers.); from Tehran.

Schl.; Ph. Ind. 1: 41.

Field 190; W.H.M.M. 150715; K.B. 321.

The star anise of commerce is obtained from trees growing in South China and Indo-China. Star anise was a new medicine and spice in Persia a hundred years ago, but the fruits and oil are now shipped regularly to India from China, and reach Iran via Bombay. The star-shaped fruits, composed of eight brown, radiating, boat-shaped carpels, vary from 3 to 3.5 cm. in diameter. They contain about 5 per cent of essential oil, consisting of solid and liquid anethol. The fruits and oil are stomachic, given to relieve cough and lung affections, and are used in confectionery and for seasoning food.

Indigofera Roxburghii Jaume (Leguminosae)

عدس تلخ

'Adas-i-talkh (Teh.); Bin-i-talkh (Isf.); the seeds.

Field 442; W.H.M.M. 150872.

These seeds are red in color, polished, flattened, oblong, 4 by 2 mm., very hard, and bitter.—They are given to relieve stomach pains (H.F.), and are similar to seeds of an allied plant, *I. trifoliata* L., prescribed in Guzrat as a restorative.

Indigofera tinctoria L. (Leguminosae)

رنک کرمانی

Rang-i-kirmānī, Nasābīdah-i-kirmani(?), Rang-i-sābīdah, Rang-i-vasmah (Teh.); Wasma (Punj.); Nil (Hind.); leaves of the indigo plant.

Field 112A, 152; W.H.M.M. 150762, 150790.

It is of historic interest to note that the old name for indigo leaves in the Punjab, Iran, and Turkey is Wasma, the name formerly used for woad, the dye obtained from *Isatis tinctoria,* and used by the early Britons. *Isatis* is indigenous to the Kuram Valley, where it is called Ranjowah or cat's filth. Indigo was known in Avicenna's time, and India has cultivated and produced the dye as a leading industry for several generations. The leaves, like henna, are sold in both coarse and fine powder, and used chiefly as a cosmetic for coloring the skin.

Inula Helenium L. (Compositae)

راٴس هندی

Ra's-i-hindī, Ghaza gouzanah (Teh.); Anduz (Ham.); Pil gush, "elephant's ear"; Rasan, Rasna of the Hindus; Andiz otu (Turk., see Boiss. 2: 186); Zanjabil chami, "ginger of Damos"; Zanjabil-i-shami, "Syrian Costus"; Année (Fr.); Helenion (Gr.); Enula Campana (Med. Lat.); elecampane root.

Ph. Pers.; Schl.; Boiss.; Pharmacog. 340; Ph. Ind. 2: 259.

Field 222; K.B. 322.

Elecampane root was an ancient medicine among the Greeks, and its use spread to other parts of Europe and to Asia. The root is hard and horny, grayish brown in color, paler within. Crystals are seen in the interstices of the wood in old commercial samples. The root, which has an agreeable, aromatic odor, and a warm, bitter

taste, is given for bronchitis and tuberculosis, and as a general aromatic tonic.—A small piece is eaten to reduce phlegm (H.F.).

Ipomoea hederacea Jacq. (Convolvulaceae)

تخم نیلوفر

Tukhm-i-nīlūfar (Teh.); Habb-el-nil (Ham.); Tukhm-i-nil; Kaladanah, "black seed" (Hind.); pharbitis seeds.

Ait.; Schl.; Fl. Br. Ind. 4: 197; Ph. Ind. 2: 532; B.P. 1914.

Field 44; W.H.M.M. 150875; K.B. 322.

The above plant grows throughout India; the flowers are blue, hence the name Nil, applied also to the water lily. The seeds are blackish, forming the quadrant of a sphere, about 5 mm. long, with a minute protuberance at the upper end; they have a longitudinal, dorsal groove, and dark brown hairs on the hilar depression. The action of these seeds is cathartic, due to the presence of an acrid resin. They are locally considered poisonous.

Ipomoea Turpethum R. Br. (Convolvulaceae)

تربد

Turbud (Teh.); Turbad (Leh); Triorit, Triputa (Sans.); turpeth root.

Field 223; W.H.M.M. 150907.

The plant is a native of India, Ceylon, and the Malay Archipelago; the root, from earliest times, has been a valued medicine in the East. Turpeth occurs in pieces of varying length, from 10 to 20 cm. long and 1 to 2 cm. wide, deeply wrinkled longitudinally, and of a dull gray or brown color. The odor is slight, the taste nauseous but slowly developed. The root contains from 5 to 10 per cent of resin, partly soluble in ether. Turpeth is a cathartic, used in lumbago and kidney trouble, given either alone or in combination with other purgatives.

Iris spuria Pall. (Iridaceae)

بیخ بنفشه

Bīkh-i-banafshah, Rīshah-i-arīsa (Teh.); Irisha (Ind. bazaars); "violet root," the name is a corruption of the Greek; orris root, root of graveyard iris.

Schl.; Boiss. 5: 126; Ph. Ind. 3: 451; I.H.B.

Field 132, 239; W.H.M.M. 150759, 150915; K.B. 323.

Violet root or orris root was recognized in ancient Greece and Rome and has long been known throughout the East, where the root is used for its perfume and as a medicine. The drug is obtained from more than one species, and the specimens differ in their properties and aroma. Aitchison says the rhizome called Orisa in Afghanistan is brought from Bijnort to the Meshed market. Bombay is supplied with orris root from Iran and Kashmir, and some of the Irani root comes from Kurdistan. A specimen of Banafshah from Iraq (Field 23, Iraq) was a well-trimmed sample of orris root from Europe (*I. florentina* L.).—It is given as an infusion to relieve headache, and is prescribed for excessive labor pains (H.F.).

Jateorhiza Columba Miers (Menispermaceae)

كلمبو

Kulambū (Teh.); Kalamb-ki-jar (Hind.); calumba root.

Field 209; W.H.M.M. 150780.

Calumba root, obtained from climbing plants growing in the forests of the Zambezi in Portuguese East Africa, has established itself as a drug in nearly every part of the world. The dry root is met with in circular or oval, transverse slices about 1 to 2 inches in diameter. The taste is very bitter, aromatic, and mucilaginous. Calumba is employed as a stomachic and bitter tonic. It contains no tannin, so can be combined with iron salts.

Juglans regia L. (Juglandaceae)

گردو

Girdū (Teh.); Charmaghy (Pers.); Jawz-i-rumi (Afg.); Joz, Goz (Turk.); Guzk (Kurd.); Akhrot (Hind.); the walnut tree.

Field 270.

The walnut is a handsome tree in Iran, Kashmir, and China. The leaves, bark, nuts, and oil are used in medicine. In Iraq cultivated walnut trees, giving nuts with a soft shell, are called Chagzī, those with a hard shell, Metahk. The nuts are somewhat smaller than those of Europe.

Juniperus excelsa Bieb. (Coniferae)

ابهل

Abhil, Aabb-el-harar (Teh.); Harhār-kohī (Afg.); Hab-el-a'ra'r (Ind. bazaars); juniper berries.

Field 248; W.H.M.M. 150876.

The juniper berries sold in Tehran are said to be collected in the Elburz Mountains. The fruit is a galbulus, gray-brown, 8 mm. in diameter, apex with a triradiate scar; it contains three hard, triangular seeds, with large oil glands and yellow resin. The odor is like turpentine, and the taste sweetish. The fruits are a well-known drug in India, where they are imported from the West. They and the oil have a diuretic action and are administered for dysmenorrhea and intestinal indigestion. The leaves are used as incense in Khorasan.

Lactuca sativa L. (Compositae)

تخم کاهو

Tukhm-i-kāhū (Teh.); Bazrul khasa (Ar.); Kahu-khaskabija (Hind.); lettuce fruits.

Field 210; W.H.M.M. 150740.

The "seeds" or fruits are gray, elongated, 4 by 1 mm., ribbed longitudinally, pointed at the apex; the odor is slightly aromatic and the taste bitter. An infusion of the fruits is given in fevers—typhoid in particular (H.F.).

Lettuce opium or lactucarium, mentioned in old pharmacopoeias, was a concrete, milky juice obtained by bruising the stems. This drug now seems to have disappeared from the markets.

Lagenaria vulgaris Ser. (Cucurbitaceae)

تخم کدو قلیانی

Tukhm-i-kadū qalyānī (Teh.); Ghya ke bij (Hind.); seeds of the bottle gourd.

Field 121, 211.

This is a climbing plant found wild in India, the Moluccas, and Ethiopia (Abyssinia). In cultivation the fruit assumes many forms, the best known of which are the pilgrim's gourd, trumpet gourd, and the calabash.

The seeds are nutritive and diuretic and constitute one of the five cucurbitaceous seeds; see *Citrullus vulgaris* Schrad.—They are given as an infusion in typhoid (H.F.).

Lallemantia ibirica F. & M. (Labiatae)

بالنکوشهری

Bālingū shahrī (Teh.); Gara za'rak, "little black seeds" (Tab.).

W.H.M.M. 150898.

The seeds of this plant are larger than those of *L. Royleana* Benth., being 5 by 1.5 mm., brownish in color, and with a V-shaped mark at the apex. They slowly become coated with mucilage when placed in water. The plant is one of the potherbs of Iran.

Lallemantia Royleana Benth. (Labiatae)

بالنکو شیرازی

Bālingū (Ham.); Bālingū-shīrāzī (Teh.); seeds.

Boiss. 4: 674; Ph. Ind. 3: 90.

Field 4; 15 (Iraq); W.H.M.M. 150901; K.B. 323.

This plant is found throughout Iran, Baluchistan, Afghanistan, Turkestan, and northern India.

The seeds are black, narrowly oblong, 3 by 1 mm., smooth, angled on the inner side, arched on the other, a white spot at the narrow end or umbilicus. When soaked in water they immediately become coated with an opaque, gray, tasteless mucilage. The seeds are used for coughs.

Languas officinarum Burkill (*Alpinia officinarum* Hance) (Zingiberaceae)

خولنجان

Khūlanjān (Teh.); lesser galangal.

Schl.; Ph. Ind. 3: 437; Sci. Papers 370.

W.H.M.M. 150877; K.B. 324.

This plant is indigenous to the Chinese island of Hainan, and is cultivated on the neighboring coast of Kwangtung and in Siam. The rhizome is an ancient spice and medicine of the East and is occasionally brought to Europe. The root is about 5 cm. long and less than 1.3 cm. in diameter, often branching, of a rusty brown color, longitudinally striated, and transversely marked with remains of leaf sheaths. The odor is aromatic and the taste hot and spicy. Galangal root is used as a condiment and is given as a stomachic and for rheumatism.

Lathyrus sativus L. (Leguminosae)

حرتومان

Hurtāmūn (Iraq); Kesari (Hind.); Lakh (Bom.); Lang (Guz.); the chickling vetch and seeds.

Field 74 (Iraq), 65A.

This annual herb is indigenous to the region that extends from the Caucasus to northern India, and is frequently cultivated in India and Iraq as a winter crop. The seeds are used for human consumption and for feeding animals; as a green manure or forage crop it surpasses other vetches. It has for a long time been known that a form of paralysis named Lathyrism is believed to result when this pulse is eaten continuously for some length of time. Guest, however, states that there is no evidence that its harmful nature has ever been recorded in Iraq.

Lavandula dentata L. (Labiatae)

اسطوخودوس

Ustūkhūdūs (Teh.); Osthoukhodouce (Schl.); the Persian name is derived from the Greek; flower heads.

See paper on this drug by I. H. Burkill in the Journ. As. Soc. Bengal, N. S., V, No. 3, March, 1909, 67–71; Ph. Ind. 3: 93; Boiss. 4: 540.

Field 18; W.H.M.M. 150737; K.B. 324.

These are the flower heads of a species of lavender sold in Tehran and brought from Shiraz. They constitute an ancient drug used by the Greeks and referred to by Arabian and Persian physicians. The name has also been applied to *L. Stoechas* L., the Staechus of old works on materia medica. The flowering spikes have the odor of rosemary and camphor, and yield an essential oil containing dextro-camphor and dextro-fenchone. In the form of an infusion the drug is given for catarrh and malaria; it is also used for washing wounds and eruptions.

Lawsonia alba Lam. (Lythraceae)

حنأ برک

Hinnāy-i-barg (Teh.); Hinna (Iraq); Rang-mehndi (Hind.); Camphire (Syr.); henna leaves.

Field 74, 188, 220; 19, 45 (Iraq); W.H.M.M. 150819, 150863.

The henna plant is cultivated throughout India on account of its leaves, which yield the henna dye, and as a garden hedge plant. They are sold in the shops in two forms: (1) the broken leaves, and (2) the leaves called "Rangh" reduced to fine powder and mixed with a small quantity of mustard oil. The principal value is as an article of the toilet, for staining the finger nails, hands, and feet a dull orange color, and for dyeing the hair bright red. The use of henna

as a cosmetic dates from very ancient times; it is practiced by Mohammedan women, and has become a vogue in Europe. Staining the finger nails with henna to make them resemble hazelnuts is called "funduq bastan." Henna is also used as an external application for skin diseases, blind boils, and leprosy.—It is painted on the pubic region for stoppage of bladder (H.F.). The seeds contain about 10 per cent of fixed oil.

Lecanora esculenta Eversm. (Parmeliaceae)

شیر زاد

Shīr-zād (Teh.); Chir zadi, Agalactie (Schl.); the lichen.

Holmes, Manna, Chem. & Drugg. 92: 25 (1920).

Field 418; W.H.M.M. 150752; K.B. 325.

This manna lichen is abundant in North Africa and western Asia, and locally in the desert of Seistan. It varies from the size of a pea to a small nut, clear brown or whitish; the interior is soft, white, with interlacing hyphae and crystals of calcium oxalate. There is a tendency for the thallus to develop excrescences of a nodular form which easily become free and drift about with the wind in the desert. Schlimmer gives references to the use of this lichen as food from the time of Alexander the Great. It contains lichenin. Its nutritive power is very low. The name of the drug means "milk begetting," and it is employed to increase the flow of human milk.

Other lichens referred to in the Field collection:

Usnea sp. (28A), a lichen of Iraq and Iran, called Lihayat-as-shāyib, or "old man's beard." This is mixed with flour in bread-making, and a decoction is sometimes taken to correct bad breath.

An Alpine lichen (87A) called Lachyat-as-sheikh. This is used as a perfume. Perfumed lichens have been observed in the genera *Evernia*, *Ramalina*, and *Zobaria*.

Boucerosca Aucheri(?), a lichen called Mārmūt, used by Brahuis in languor and oppression (Ait.). Pāla-mangy and Māhriz are the Kashmir names of two lichens employed to dye the nails and hands as substitutes for henna (Ait.). One of these is probably *Squamaria chrysoleuca* Sm.

Lens esculenta Moench (Leguminosae)

نیسک

Nisik (Kurd. in Iraq); Adas (Turk.); Masūr (Hind.); the lentil.

Field 48, 66, 68 (Iraq); 105A.

The lentil is an excellent fodder or grazing plant, affording a most nutritious pulse. As an article of food it has been known from the most ancient times; specimens have been discovered in the tombs of Egypt dated 1500 B.C., and are shown in the Wellcome Historical Medical Museum. Lentils are used as food whole or split (when they are called in India "Dall"), and in the form of flour.—A specimen in the American School for Boys, Baghdad, is labeled "Adas mar, lentils ground and taken by women to facilitate parturition" (H.F.).

Lepidium Draba L. (Cruciferae)

مچه

Muchchah (Isf.); Bajindak (Afg., Hind.); Buski (Bal.); hoary cress.

K.B. 325.

The hoary cress is a weed of cultivation distributed westward to Europe. In Tabriz the young shoots are used as a salad or potherb under the name of "Khili-wili." The seeds, smaller than those of *L. sativum*, are oval and dark brown. Seven or eight seeds are given as a dose for flatulence.

Lepidium sativum L. (Cruciferae)

تخم شاهی

Tukhm-i-shāhī (Teh.); Tukhm tartizak (Isf.); Halim (Hind.); Asalia (Bom.); Tara tezak (Afg.); cress seed.

Ait.; Schl.; Ph. Ind. 1: 120; Boiss. 1: 354.

Field 31, 448; W.H.M.M. 150717; K.B. 325.

Garden cress is a native of Iran, and is widely distributed as a cultivated plant eastward to Tibet. The seeds are exported as a drug from Iran to India, and westward to Europe. They are light brown or reddish brown, oblong, 3 by 1.2 mm., with a depression on the inner margin, and a white spot at one end, have a pungent, cress-like taste, and become coated with transparent mucilage when soaked in water. They are tonic, aphrodisiac, and diuretic.

Linum usitatissimum L. (Linaceae)

تخم بزرک

Tukhm-i-bazrak, Bazrak (Ham.); Basarak Katrin, "little seed of flax" (Pers.); Tukhm-i-katan (Ait.); Bazr ul Kattan (Achundow);

Bizre Kattane (Schl.); the names for linseed in India are Alsi, Atasi, and Alashi; linseed.

Ph. Ind. 1: 239.

Field 21; 63, 67 (Moroccan and River Plate seeds from Iraq); W.H.M.M. 150809, 150920; K.B. 326.

Aitchison informs us that in Afghanistan the flax plant and seed are known as Zagher; the oil of the seed as Roghan-i-zagher; the fiber and linen cloth as Katan or Katun. The plant is cultivated in Turkestan for the oil of its seeds, but, as in India, the fiber is not collected. In Iraq Moroccan linseed has been distributed in considerable quantities as Indian varieties have been severely attacked by rust disease (G.). The oil is valued for various industrial purposes and the seeds are eaten as sweetmeats.—Boiled with *Althaea* sp., the seeds are used as a poultice for boils (H.F.).

Lolium rigidum Gaud. (Gramineae)

گل چمن

Gul-i-chaman (Teh.); Ziwan (Iraq); rigid rye grass; seeds.

W.H.M.M. 150705.

This is a tufted annual grass grazed by sheep and other animals. It is related to the darnel grass (*L. temutenlum*), "Jamdar," which is regarded as an obnoxious weed, since its seeds are sometimes infected by an ergot fungus generating a narcotic poison. The use of the seeds sold in Tehran is not known.

Loranthus Grewinkii Boiss. and Bunge (Loranthaceae)

کشمش کولی

Kishmish-i-kūlī (Teh.); Kishmish-kawali (Ind. bazaars); Dibk (Ar.); mistletoe berries.

Field 139; W.H.M.M. 150756.

These fruits are called raisins of Kawali, Kawali being the name for gypsies in Iraq and Iran. Le Bode in his "Travels in Lauristan and Arabistan" mentions his being shown in the forests of the Zagros Mountains, on the road from Kermanshah to Baghdad, a fruit called by the natives Angur-i-kauli (Kawali) or grapes of Kauli, a parasite on the oak. The dried berries are rounded, 8 mm. in diameter, soft, dark brown, and shriveled, and have one seed. They are mawkish in taste, containing a form of caoutchouc which can be drawn out in threads. The author of the "Makhzan-el-Adwiya"

says the properties of the berries are resolvent and laxative.—The dried berries mixed with water are used as a depilatory (H.F.).

Luffa acutangula Roxb. (Cucurbitaceae)

طوری

Tūrī (Teh.); Tukhm-i-turi (Afg.); loofah or towel gourd; the seeds.

Field 90.

The plant is called, in Sanskrit, Koshataki, a general name for the genus *Luffa*, from Kosha, the cocoon of a silkworm, and in allusion to the way in which the seeds are enclosed in a thin, fibrous network, which when dry is used as a flesh brush or bath sponge. The seeds are gray, oval, flat, 12 to 14 by 8 mm., with a rough surface marked with small, irregular, black specks. The seeds are medicinal; they possess purgative and emetic properties and yield an oil.

Mallotus philippinensis Muell. Arg. (Euphorbiaceae)

قنبلیله

Qunbalilah (Teh.); Kamela (Hind., Bom.); Kapila (Mad.); kamala.

W.H.M.M. 150845.

Kamala consists of the red glands that form on the fruit of this tree, which grows throughout tropical India. The drug is a red, heavy powder, somewhat gritty, insoluble in water, but partly dissolving, with an orange color, in alcohol. This drug is used as an anthelmintic. Formerly employed as a dye for silk and wool, it has been almost entirely replaced by aniline dyes.

Malva sylvestris L. var. **mauritiana** Boiss. (Malvaceae)

گل پنیرک

Gul-i-panīrak, Tukhm-i-khābāzi (Teh.); Khitmi-i-kuchak, "small khitmi" (Pers.); Penirek, Khib-baze (Schl.); Hamam Komandji (Turk.); flowers and fruits of common mallow.

Boiss. 1: 819; Ph. Ind. 1: 204.

Field 26, 212, 84A; W.H.M.M. 150757, 150796; K.B. 326.

Aitchison says the flowers of the mallow, called Gul-i-khatmi, are collected in northeastern Iran, and exported for medicinal purposes. Khabazi is the Arabic name of the fruits imported into India from Iran. In the samples from Tehran both flowers and fruits of

the above species of mallow occur, although Panirak ("little cheeses") refers only to the rounded fruits. Khatmi or Khitmi is usually applied to the larger plants belonging to a species of *Althaea*. The mallows have mucilaginous and cooling properties, and are given for coughs.—Mixed with violet flowers, *Nymphaea alba* L., jujube, sebestan, and *Alhagi camelorum* Fisch., mallow is sometimes prescribed as a purgative (H.F.).

Matricaria Chamomilla L. (Compositae)

بابونه

Bābūnah, Tukhm-i-bābūnah (Teh.); Babunaj (Pers.); Baibun (Mosul); camomile flowers.

Field 142, 202; W.H.M.M. 150732, 150904.

Formerly the camomile flowers met with in the bazaars were all obtained from northern India and Iran, and were the flowers of the above plant, named after the village of Babunah in Arabia where it was particularly abundant. Other fragrant composites occasionally make their appearance. The camomiles sold in the bazaars of Iraq consist of flowers of *M. aurea* L. (G.). Post identifies those in Syria with *Achillea fragrantissima* Forsk. (see *Anthemis*). We have received from Tehran a drug under the name of "Mukhlisah" (Maglah), which is *Matricaria (?decipiens)*. Camomiles are carminative, stimulant, and febrifuge.—Camomile tea prepared from the daisies is given to relieve intercostal neuralgia. An infusion of the drug is prescribed for dysentery (H.F.).

Medicago sativa L. (Leguminosae)

قت

Qatt, Jatt (Ar.); Winjah, Yunjah (Kurd.); Aspust (Bal.); Spistha (Afg.); lucern or alfalfa.

Field 29 (Jaffa Lucerna), 62 (Iraq).

Alfalfa is a native of western temperate Asia. It is extensively cultivated in Khotan, and is largely grown in many parts of India. There are at least two varieties; the Kandahar, and the Irani or Arabian. The latter, doubtless of Iraqi origin, is generally free from dodder and for this reason the seed was exported annually before the World War from Basra to South Africa (G.). The seeds are oval or rounded, 2 mm. long, brown, white, or greenish in color.—They are used as a cooling poultice for boils (H.F.).

Melia Azedarach L. (Meliaceae)

سنجد تلخ

Sinjad-i-talkh (Teh., Isf.); Mab-ul-dan (Ar.); Bakayan (Hind.); China tree fruits.

Field 443; W.H.M.M. 150840.

The China tree or Persian lilac was probably introduced into the southern parts of India by the Mohammedans, and various parts of the tree have long been used in medicine by the Arabs and Persians. The fruits are called Sinjad-i-talkh or bitter sinjad to distinguish them from sinjad, the fruit of the oleaster (*Elaeagnus angustifolia* L.). The berries are oblong or rounded, 12 mm. in length, with smooth, wrinkled, reddish brown skin, a pulpy, bitter flesh, and hard, five-grooved stone. The fruits are given for fevers. The stones are worn as a necklace to avert contagious diseases.

Mentha sylvestris L. (Labiatae)

پونه

Pūnah (Teh.); Gul-i-punah (Isf.); Pudina (Hind.); leaves of mint.

Field 256, 412; W.H.M.M. 150811.

The wild mint is indigenous to the temperate western Himalayan region and to Iran. The general name for mint, best known in the East, is Fudanaj, the Arabic form of the Persian word, Pudina. The author of the "Makhzan-el-Adwiya" describes three kinds of Fudanaj: the wild, mountain, and water mint. Mountain mint has hoary leaves, but the specimens from Tehran, although fragrant, are too imperfect to name specifically. Different kinds of mint are cultivated in gardens and are used as domestic remedies on account of their pleasant odor and stimulant and carminative properties.

—Mint leaves are prescribed for waterbrash or pyrosis; they are also prepared like tea for chills, rheumatism, and dysentery (H.F.).

Merendera persica Boiss. (Liliaceae)

سورنجان سفره شده

Sūrinjān-i-sufrah shudah (Teh.); the corms.

Ph. Pers.; Boiss. 5: 167; Schl.; Ait.; Ph. Ind. 3: 496.

W.H.M.M. 150870; K.B. 326.

This plant, allied to *Colchicum*, occurs in North Iran, Afghanistan, the juniper tracts of Baluchistan, and in the Punjab. Aitchison found this plant common all over the Badghis and Khorasan. The corms are collected as a medicine and exported from Meshed through Iran via the Persian Gulf to India. The drug is one of the forms of the ancient Hermodactyl. It is probably the Surinjan-i-shirin or sweet Surinjan, a medicine used by Mohammedans in India. The root from Hamadan is broken into pieces showing a white, starchy fracture with no perceptible taste or smell. The drug is said to have the same action as the bitter Surinjan (*Colchicum* spp.) as a remedy for rheumatism.

Mirabilis Jalapa L. (Nyctaginaceae)

تخم لال عباس

Tukhm-i-lāl'abbās (Teh.); Gul-i-abbasa (Pers.); fruits of the marvel of Peru.

W.H.M.M. 150895.

The marvel of Peru or four-o'clock is a plant of tropical America. It is named *Mirabilis*, or wonderful, on account of the variegated colors of the flowers, and *Jalapa*, as it was formerly supposed to be the true jalap plant. The fruits are oval or vase-shaped, 8 by 5 mm., dark reddish brown, five-ribbed, and papillate, containing a white, starchy seed. Little is known about its medicinal action, but the fruits have been said to be used in adulterating black pepper.

Morus nigra L. (Moraceae)

شاه توت

The fruits: Tūt-i-kushk (Teh.).

The root: Rīshah-shāh-tūt (Teh.).

The tree: Shāh-tūt, "royal mulberry" (Pers.).

Field 46A, 269, 402; K.B. 327.

The black or grafted mulberry is cultivated in Iran and Baluchistan, principally for its fruit; the white mulberry (*M. alba*), for sericulture. They both yield fruit which in season is sold in the bazaars and met with in nearly every household (Ait.). When carefully dried, the fruits are called Tut-i-dham, and supply a wholesome and nutritious article of diet during winter.

The other drug of the mulberry tree from Tehran consists of the bark of the root, reddish colored externally, with strong, silky white liber cells. It is used for dysmenorrhea.

Myristica fragrans Houtt. (Myristicaceae)

جوز بویا

Jauz-i-būyā, "fragrant nut" (Teh., Ar.); Bazbaz (Pers.); Jaephal (Hind.); nutmeg and mace.

Field 147; W.H.M.M. 150851.

The well-known seeds of the nutmeg are used all over India and Iran as a spice and for medicinal purposes.

Mace, the aril or testa, called Gul-i-jauz or "flower of the nutmeg," is sold and employed for the same purpose as the kernel.

Myrtus communis L. (Myrtaceae)

تخم مورد

Tukhm-i-mūrd (Teh.); Hab-el-aas (Ar.); Uurd (Abu Mansur); myrtle fruits.

مورد سبز

Mūrd-i-sabz; Barg-i-mūrd (Teh.); leaves of the myrtle.

Field 24; W.H.M.M. 150814, 150827.

Myrtle berries are black, pea-shaped, aromatic, and slightly sweet; each fruit contains several white, hard, kidney-shaped seeds. The leaves are small, lanceolate, and dotted with glands, emitting an agreeable odor when bruised. All parts of the myrtle contain a volatile oil to which the virtues of the plant are due. The plant is stimulant and astringent, and the volatile oil is antiseptic, parasiticide, and rubefacient.—It is applied hot as a poultice for boils (H.F.).

Nannorrhops Ritchieana Wendl. (Palmae)

کا کل زرد

Kākil-i-zard (Teh.); Khove, Khū (Afg.); fiber of the dwarf palm.

W.H.M.M. 150798.

The soft fiber or tomentum, very like camel's hair, from the petioles of this palm is used as tinder and for dressing wounds. Khū is the name in Afghanistan for tinder obtained from any source and used in lighting pipes and fires.

Nardostachys Jatamansi DC. (Valerianaceae)

سنبل لطیب

Sumbul-i-latīf, Sumbulu'l-tib (Teh., Isf.); Sumbul-jibali (Ar.); Jata-masi (Sans., Hind.); Balchar (Afg.); Bekh-i-sumbul (Pers.); musk root, Indian spikenard.

Field 3 (Isf.), 423; W.H.M.M. 150745.

The above plant, growing in the alpine Himalayas, yields the Nardus root or spikenard of the ancients. The rhizome is short, thick, and dark gray, crowned by a bundle of strong fibers called by the natives "Devil's hair." The odor resembles valerian, and yields about 1 per cent of volatile oil containing valerianic acid. The physiological action is similar to that of valerian root, and the drug is administered for nervous disorders.—Prepared like tea it is given for heart diseases (H.F.).

Nepeta micrantha Bunge and **N. ispahanica** Boiss. (Labiatae)

زوفا

Zūfā, Zūnā (Teh.); Zufah-i-yabis (Ar.); the flowering herb.

Boiss. 4: 166; Achundow; Ph. Ind. 3: 116.

Field 23; W.H.M.M. 150733; K.B. 327.

Zufah is a fragrant plant used since primitive times as a carminative in the East. It has often been referred to as hyssop, but recent examinations have shown it to be *Nepeta*. Dymock found the Zufah of Sind to be *N. ciliaris* Benth., while the plant of that name in Baluchistan is *N. bracteata* Benth. Two specimens from Tehran consist of the fruiting calyx, flowers, and seeds. The calyx is erect, green, with purplish, acute teeth. The seeds are oblong, brown, 1 mm. in length, with a white, V-shaped scar at the end. They are mucilaginous when placed in water and are given for influenza and catarrh.—As an aromatic mint a cold infusion is prescribed for pain in the chest (H.F.).

Nicotiana Tabacum L. and **N. rustica** L. (Solanaceae)

تو تون

Tūtūn (Iraq); Tambaku, Tumaku; N. rustica=Turkomani tambaku (Afg.); tobacco leaves.

Field 89 (Iraq); 18, 23.

Tobacco is cultivated in northeastern Iran for local consumption as well as for local trade. It is an expensive crop there, as the fields must be heavily manured and require careful irrigation. The leaf is frequently treated with gur or crude sugar to moisten and add weight to the leaf. Beside being smoked, it is extensively used as an errhine or snuff (Nashwar). This is sometimes mixed with powdered ashes of *Ephedra pachyclada* Boiss., Huma (Gnetaceae) to render it more pungent. Two samples of snuff are noticed in the collection:

Thebba (253 Iraq). Snuff, tobacco powder soaked in 'Araq.

Bernooty (234 Iraq). Snuff, tobacco powder perfumed with jasmine.

Nigella sativa Sibth. (Ranunculaceae)

سیاه تخمه

Tukhm-i-siyāh, Siyāh-danan, Siyāh-tukhmah (Teh.); Hab-es-souda (Ar., Egy., Iraq); Kala jira, Mugrila (Hind.); false or black cumin, fitches.

Boiss. 1: 68; Ph. Ind. 1: 28.

Field 42; 56A; 7, 21 (Iraq); W.H.M.M. 150906; K.B. 327.

This is an annual herb, sometimes called nutmeg flower or fennel flower, cultivated in Egypt, Syria, and Iran. According to Birdwood, the seeds are the black cumin of the Bible, the melanthion of Dioscorides, and the gith of Pliny. They are black, triangular, 3 mm. long, the testa rough-wrinkled, with a white, oily kernel within. When crushed they have a pleasant odor of lemon. The seeds contain an essential oil, a fixed oil, and a saponin-like body, and are used extensively as a spice and medicine. The ancient Mohammedan custom of sprinkling the seeds, like those of cumin, over the surface of bread, still prevails in Tehran and Tabriz. There is an Arab proverb: "In the black seed is the medicine for every disease except death." Around Tabriz *N. arvensis* L. is cultivated as a potherb and for its seeds. It is called Gara tsochorek oti, "Black bread weed" (Gilliat-Smith).

Nymphaea alba L. (Nymphaeaceae)

گل نیلوفر

Gul-i-nīlūfar, Nīlūfar-i-kirmānashāhī (Teh.); Nenuphar (Ph. Pers.); white water lily flowers.

Ait.; Boiss. 1: 104; Fl. Br. Ind. 1: 114; Ph. Ind. 1: 70.

Field 10, 207; W.H.M.M. 150781, 150858; K.B. 328.

These are the flowers, stalks, and leaves of the white water lily, found in ponds throughout Europe and Siberia. Nīlūfar is a name also applied to flowers of other water lilies, and sometimes to species of *Ipomoea*, which have blue flowers. Kamal, the flowers of a *Nymphaea*, is sold in drug shops in India, and occasionally the flowers of the sacred or Egyptian lotus (*Nelumbium speciosum* L.) are used medicinally throughout China. The flowers have cooling and astringent properties, and are administered locally, especially to

children, for fevers and chest troubles (C.).—For this purpose the flowers are often mixed with *Adiantum Capillus-Veneris* L., jujube, violet flowers, oxtongue, and sugar (H.F.).

Ochrocarpus longifolius Benth. & Hook. (Guttiferae)

نور موش

Nūr-mūs, Normush (Ham.); Tambrā (red) nagkeshur (Pers.); the flower buds.

Fl. Br. Ind. 1: 270; Ph. Ind. 1: 172.

K.B. 328.

This tree, called cobra saffron, grows in the western part of the peninsula of India from Canara to the Concan. The flower buds come principally from Rajapur and the Deccan. The reddish brown, globular buds, like cloves, are astringent, and are used for dyeing silk. In Iran, where they seem recently to have been introduced, they are used as an aromatic tonic.

Ocimum Basilicum L. (Labiatae)

تخم ریحان

Tukhm-i-raihān (Ham., Teh.); Ruhan (Kurd.); Takmeria (Bom.); Semen Basilici (Old Herbals); Alfabaca (Port.); sweet basil.

Ait.; Boiss. 4: 534; Fl. Br. Ind. 4; Ph. Ind. 3: 83.

Field 84A; W.H.M.M. 150830; K.B. 728.

The sweet, Roman, or garden basil is a native of India and Iran, and is distributed in Africa and Malaya. Raihan is the Arabic name for "the herb," and the plant is a potherb much used for its mint-like aroma. The "seeds," long known in medicine, are said to be the Badranj of Avicenna. Large quantities are imported into India from Iran. The nutlets or "seeds" are blackish, oblong, 2 to 2.5 mm. long, broad, punctulate, slightly arched, with a white umbilicus at the narrow end. When placed in water, they immediately become coated with a semi-opaque mucilage. Schlimmer remarks that the seeds are eaten with bread and cheese.—The seeds are prescribed as a cold infusion for influenza (H.F.).

Ocimum canum Sims (Labiatae)

تخم شربتی

Tukhm-i-sharbatī (Ham., Teh.); Tukhm-chirbati, Reyhane Kouhi, Badroudge ibieze (Schl.); white basil.

Field 194; W.H.M.M. 150774; K.B. 328.

Schlimmer remarks that Shiraz supplies Iran with these seeds and adds that they are an indispensable ingredient in iced sherbet (sorbets à la glace). The seeds, or nutlets, are black, punctulate, oblong or ellipsoid, 2 by 1 mm., arched on one side, with a bifurcate line on the other. They are smaller than those of the sweet basil, with a less prominent, white umbilicus, but, like them, they become coated with opalescent mucilage when placed in water. The seeds are given locally for lung and chest complaints and as a heart tonic.

Olea europea L. (Oleaceae)

زیتون

Zaitūn; olive.

Cultivated for its fruits and for the extraction of oil, the olive tree provides an important article of diet and medicinal remedy.—Leaves are sometimes prepared as a decoction for coughs (H.F.).

Onosma echioides L. (Boraginaceae)

ریشه هوه چوبه

Rīshah havah-i-chūbah (Ham.); Havah-i-chūbah (Teh.); Ratan-jot (Hind.); Indian alkanet root.

Achundow; Schl.; Boiss. 4: 181; Fl. Br. Ind. 4: 178; I.H.B.; Ph. Ind. 2: 54.

Field 165; W.H.M.M. 150718; K.B. 329.

This plant, growing in Afghanistan and Siberia, affords a root which is substituted for European alkanet (*Anchusa tinctoria*), from Al-kanna of the Arabs, employed as a dye and medicine in early times. The root of the allied species, *O. Hookeri* Clarke, is called Ranj-i-badshah, "King's dye." The tapering root has a purplish red color, and the cortical portion easily separates in flakes. It imparts its color to oils and spirits, and is used in coloring medicinal preparations. In Iran the root is powdered and given to horses for coughs and as a condition powder.

Orchis latifolia L. (Orchidaceae)

سعلب

Sa'lab (Teh.); Salab-misri (Ar.); Punjah-i-salaba; Oriental salep.

Field 229; W.H.M.M. 150908.

Palmate or hand-shaped tubers of orchids are considered the best for medicinal purposes. They are deprived of their epidermis by

scalding in water and then dried. They are hard, horny, whitish, opaque or translucent, branching tubers, mucilaginous when placed in water. A gruel made of these roots is esteemed as a nervine tonic, demulcent, and nutritive.—As an infusion it is given to relieve hoarseness (H.F.).

Oryza sativa L. (Gramineae)

برنج سدری

Birinj-i-sadri, Berij sadri Gilan (Teh.); Timan (Iraq); Ruzz (Ar.); Shilib, Pirīnj (Turk.); Chaltuk (Kurd.); rice grain.

Field 58, 72; 15, 18, 20, 34 (Iraq).

"Rice is cultivated as a summer crop over immense areas, especially in the southern marshes, also in the valleys of Kurdistan and on the flow canals of certain regions in lower Iraq" (G.). There are three main types of the crop represented in the above specimens from Iraq: (1) Harfi or early-sown, (2) Afli or late-sown, and (3) Shittāl or transplanted.

Timan is the hulled rice of Iraq. The two samples from Tehran are of fine, white, table rice.

Panicum miliaceum L. (Gramineae)

ارزن

Arzan (Pers.); Dukhn (Iraq); Chīna (Hind., Sans.); millet grain.

Field 57, 106A; 22, 80 (Iraq).

Common millet is cultivated as a summer crop in Iraq, especially along the Shatt-al-Hai. The grain can be cooked and eaten whole or made into bread. It is commonly used in the form of porridge. The green plant is an excellent fodder for animals.—The seeds provide feed for chickens (H.F.).

Papaver somniferum L. (Papaveraceae)

کوکنار

Kavl-a-kūknār, Pōst-a-kūknār (Pers., Afg.); poppy heads.

تخم خشخاش

Tukhm-i-khash khāsh; Tukhm-i-shaga'ig (Ham.); Kishkash (Ar.); poppy seeds.

Ait.; Post; Ph. Ind. 1: 73.

Field 48, 64, 81A, 82A, 185; W.H.M.M. 150835, 150911; K.B. 329.

Opium is known locally as Afyun, but the cultivation of the opium poppy is prohibited in Iraq. The capsules, some of them scarified, are sold in the bazaars, but their narcotic effects are less powerful and more uncertain than those of opium. The seeds contain 50 per cent of drying oil, which is sometimes called Roghan-i-khash khāsh. The seeds, often erroneously supposed to be poisonous because they are contained in the opium-yielding capsule, are wholesome and nutritious, and are eaten chiefly in sweetmeats.—The seeds are given to relieve epistaxis; an oil derived from them is employed in making soap. The fruits mixed with *Malva sylvestris* L. var. *mauritiana* Boiss. and *Linum usitatissimum* L. form a paste for application to boils (H.F.).

Parmelia kamtschdalis Esch. A lichen. See *Roccella Montagnei Bél.*

Peganum Harmala L. (Rutaceae)

تخم اسفند

Tukhm-i-isfand, Sipand (Teh.); Harmal, Harmal rutbah (Ar., Iraq); Aspand (Kurd.); Uzarih (Turk.); the Syrian rue.

Achundow; Schl.; Post; Boiss. 1: 917; Fl. Br. Ind. 1: 486; Ph. Ind. 1: 75; Weisner 44.

Field 46; 4, 26, 27, 119 (Iraq); W.H.M.M. 150850; K.B. 329.

The mountain rue is a plant of Iran, Arabia, Syria, North Africa, and southern Europe. The plant and seeds were used medicinally by the Greeks and Romans, and were noted in European herbals in the 17th century. The seeds are exported from Iran into India, where the plant was originally introduced by Mohammedans. The seeds are dull gray, 2 mm. long, angular, having a bitter taste, and, when crushed, a heavy, narcotic odor. The active principle resides in the alkaloids, harmaline and harmine. The custom prevails in Iran and Iraq of sprinkling the seeds on burning coals at marriages to avert the malignant influence of the Evil Eye; the smoke from the burning seeds is said to drive away epidemics. The seeds are reputed to be an alterative and purifying medicine, and are supposed to stimulate the sexual system.

Peucedanum graveolens Benth. & Hook. (*Anethum graveolens* L.) (Umbelliferae)

تخم شوید

Tukhm-i-shivīd (Teh.); Shivit (Isf.); Shabbit (Ar.); Sawa, Soyah (Hind.); Habbat Halwah (Iraq); Anitum (Yunani); dill.

Field 69, 409; W.H.M.M. 150847; K.B. 303.

The well-known dill is a tall, annual or biennial herb, with a strong, aromatic odor, finely dissected leaves, and umbels of yellow flowers. Dill fruits are sold in the bazaars and used as a condiment and carminative. On distillation they yield an oil used in medicine for the preparation of dill water. The plant is often confused with fennel and the fruit with caraway seed; hence the name Karawyah, sometimes used. In Iran dill serves as a potherb; the leaves are cooked with rice as a condiment to restore lost appetite.

Phaseolus radiatus L. (Leguminosae)

ماش

Māsh (Iraq, Pers.); Urd or Urid (Ind.); Masha (Sans.); the seeds.

Field 76A, 274; 5, 60 (Iraq).

Mash is cultivated as a summer pulse crop, sometimes mixed with maize or sorghum. The green pods are eaten as a vegetable, and the plant is used as fodder or green manure. The small, green, oblong beans are cooked and eaten, made into biscuits, cakes, and sweetmeats. In Afghanistan this pulse is so much esteemed that it is called Mash-i-maha, "the king of peas."

Phaseolus vulgaris L. (Leguminosae)

فاصولیه

Fāsūliyah (Iraq); Lubia, Lubia-kermiz (red) (Teh.); Rāzmah (Kash.); French bean; the seeds.

Field 69, 70, 77A, 75 (Iraq).

The French or kidney bean is grown as a vegetable or a pulse in kitchen gardens. The pods can be eaten green and the ripe seeds dried as haricot beans, or white soup beans.

The beans are ovate, oblong, 12 to 14 by 6 to 8 mm., white, red, or brown, splashed with black streaks, the hilum on the inner side.

Phoenix dactylifera L. (Palmae)

نخل تمر

Tamr (ripe fruit), Rutab (half ripe), Khalal (unripe), Nakhli (male tree), Khurmā; the date palm, date.

Date gardens are found on both sides of the Euphrates from An Nasiriya to Basra. From Nahr Umr down the Shatt-al-Arab to Fao is the largest date-growing district in the world. There are

date gardens on both banks which vary in width from a few hundred yards to five miles. The date is the most important crop in Iraq (G.).

The best variety of Iraq dates is grown in the Suq district. The finest fruit is produced when the tree is between twelve and forty years old. Over a hundred varieties are known, but in Iraq they may be divided into two classes: (*a*) those used chiefly for trade; (*b*) those used for local consumption.

(*a*)	(*b*)
1. Halawi	1. Mishi
2. Khadrawi	2. Gentar
3. Sa'ir	3. Hasawi
4. Dairi	4. Khasib
5. Za'adi	5. Lihur
6. Digal	6. Barhi

Of these 60 per cent are of the Sa'ir variety. The Halawi are popular in America, the Khadrawi sell in Europe while India and Iran are content with the Sa'ir varieties. The numerous uses of the date palm are proverbial.—The fruit yields a syrup and is used in making the local spirit, 'araq (H.F.).

Phyllanthus Emblica L. (Euphorbiaceae)

آمله سفته

Amulah-i-suftah (Teh.); Amulah-mugashshar (Isf.); Amlaj (Ar.); Aola amla (Hind.); Kurk amla = dried fruit, Amla morabba = preserved fruit, in Turkestan; emblic myrobalans.

Field 16 (Isf.); W.H.M.M. 150871.

This tree grows throughout tropical India, and is valued for its fruits which, when dried, constitute the emblic myrobalans of commerce. As met with in the shops, the drug occurs in broken sections of a fruit, smaller than a walnut, with dried pulp and hard, woody endocarp. The pulp is very acid and contains much tannin. The fruit is astringent, stomachic, and refrigerant; mixed with grape juice and honey it is a favorite drink for fever and diarrhea.

Physalis Alkekengi L. (Solanaceae)

کاکنج

Kākanj (Isf., Teh.); Gul-i-kākanj; Alkikenji (Ar.); clammy winter cherry.

Achundow; Boiss. 4: 287; Post; Ait.; Schl.; Ph. Pers.; Ph. Ind. 2: 560.

Field 12 (Isf.), 162; W.H.M.M. 150721; K.B. 330.

This is a plant of Arabia, Syria, Iran, and Baluchistan, distributed also in Europe. The berries are like dried cherries, but full of pulp, in which are embedded many reniform, yellowish seeds. As sold in the bazaars, broken fragments of the red, accrescent calyces are mixed with the drug. The fruits are said by Schlimmer to be hydragogue and vermifuge. Achundow indicates their use in certain female complaints. Locally they are regarded as a remedy for syphilis, and are supposed to be intoxicating when taken in sufficient quantity.

Pimpinella Anisum L. (Umbelliferae)

انیسون

Anīsūn, Badian-i-rumi (Teh.); Antchibun, a corruption of Anisum (Tab.); Erva dos, from Portuguese Herba doce (Dymock); aniseed.

Ait.; Boiss. 2: 866; Schl.; Ph. Ind. 1: 131.

Field 25; 35A; 10 (Iraq); W.H.M.M. 150768; K.B. 330.

Aniseed is cultivated largely in the U.S.S.R., as well as in Iran, for its seed, which is employed as a condiment and medicine. The fruit is often confounded with fennel, as the Arabic name Badian in some districts is applied to aniseed and in others to fennel. Aniseed has been introduced into India from Iran, whence the supply for the Bombay market still comes. It is mainly a Mohammedan medicine and is given in cough mixtures, and as a flavoring agent. Arak-badiani or anise water, prepared by distillation, is mentioned by Schlimmer, and local spirit is still flavored with it. The active principle resides in an essential oil consisting of 80 to 90 per cent of solid anethol, which separates slightly below ordinary temperatures, and anisic methyl charvicol.

Piper Cubeba L. (Piperaceae)

کبابه چینی

Kabābah-i-chīnī (Teh., Isf.); Kabab-chini (Hind.); cubeb pepper.

Field 25, 440; W.H.M.M. 150880.

Cubeb or tailed pepper is imported from Malaya and Java; it was formerly supposed to have come from China. The commercial drug consists of nearly globular fruits measuring about 4 mm. in diameter, of grayish brown or black, reticulately wrinkled on the surface, and abruptly prolonged at the base into a slender stalk or "tail." Within the pericarp is a single seed. Cubebs exhale, when

crushed, a spicy odor, and possess a strong, spicy, and bitter taste. They have a stimulant and antiseptic action on the mucous membrane of the genito-urinary organs, and are also a diuretic.

Pistacia integerrima Stew. (Anacardiaceae)

چهار تنخوش

Chahār tankhūsh (Teh.); Chatlanguch (Ham.); Kharshnai (Kash.); fruits.

W.H.M.M. 150839; K.B. 331.

This is the northwestern Himalayan form of the turpentine tree, called also the false or donkey mastich. The small drupes are broader than long, 5 by 6 mm., glabrous, rugose, gray with a bony stone. They have a marked terebinthinate odor, and are used locally to impart flavor to milk.

جفت

Field 201; W.H.M.M. 150706.

Under the name of Jift or Juft, the broken shells of the galls of the turpentine tree are sold in Tehran. Being very astringent, they are used for tanning; mixed with lime, they remove hair from skins.

Pistacia Khinjuk Stocks. (Anacardiaceae)

حب الغار

Habbu'l ghār (Isf.); Habul-khazra (Teh.); Hebbul-beneh (Ar.); the fruits.

Field 449; 116 (Iraq); K.B. 331.

سبز قلنج

Subz-i-gulanj (Teh.); Buzghanj (Ham., Isf.); Gul-i-pisteh (Bom.); Afs-el-batum (Tri.); the galls.

Ait.; Boiss. 2: 6; I.H.B.; Ph. Ind. 1: 377.

Field 422; W.H.M.M. 150878; K.B. 331.

This tree is common in Iran, Baluchistan, and Afghanistan, and has been described under different species names. The tree yields a resin-like material, and the nuts, which are eaten, afford a sweet oil; the leaves and galls are employed for tanning. The small, seed-like fruits are oval in shape, 6 mm. long, reddish brown in color, with an acid taste and terebinthinate odor. The fruits are eaten and are said to be good for debility.—Prepared like tea, they relieve stomach pains (H.F.).

The galls are formed by *Pemphigus utricularius* Pass. (figured in "Les Zoöcécidies des Plantes d'Afrique, d'Asie et d'Océanie," by C. Houard, 1923, figs. 1010–1012, p. 471, under *P. atlantica* No. 1731). They contain about 40 per cent of gallotannic acid, are ovoid, larger than peas, somewhat fig-shaped, pink in color, turning gray; the wall is thin, brittle, and rugose on the outside, smooth within and translucent. The taste is astringent and slightly terebinthinate. In Persian and Arabic works on medicine the galls are described as cold, dry, and astringent.—Mixed with Indian spikenard they are administered to relieve stomach pains (H.F.).

Pistacia Terebinthus L. (Anacardiaceae)

سقز سفید

Sagiz-i-safīd (Teh.); Sages (Stapf); Zunghari, Sukhur; the oleo-resin and leaves.

Field 129; W.H.M.M. 150894.

The turpentine tree grows freely near Banni in the hills of Sherag. Its oleo-resin is a thick, tenacious, white, opaque mass, gradually taking the shape of the bottle in which it is placed; it softens on warming and has a pleasant terebinthinate odor. It is used in Tehran as a chewing gum, and is similar to the Chian turpentine which was recommended about fifty years ago as a remedy for cancer. The leaves are astringent and are used for dyeing.

Pistacia vera L. (Anacardiaceae)

پسته

Pistah (Teh.); pistachio nuts in shells.

Field 265; 49A, 50A, 51A; 124 (Iraq).

پوست پسته

Pust-i-pistah (Teh.); husks of the fruits.

Field 186.

The fruit of the pistachio nut is the size of an olive; its husk is reddish and astringent, its odor terebinthinate. Within the fruit is a woody shell or nut, brownish white in color, with hard, horny, and polished texture and ovoid shape. The kernel or almond is pale green, and covered with a thin, brittle, brown skin, easily removed by scratching. The taste is sweet, oily, and balsamic. The outer husk of the fruit (Pust-i-pistah) is used as an infusion for dysentery and is imported into Bombay from Iran as a dyeing and tanning agent.

The fruits of various species of *Pistacia* have been used as food. Laufer in "Sino-Iranica" remarks that these indigenous trees from ancient times have occupied a prominent place in the life of the Persians. The youth of Persia were taught to subsist on terebinths, and "terebinth eaters" became a nickname. The seeds of the pistachio tree are probably the terebinths referred to, but other species and varieties also afford edible fruits. In Baluchistan the fruits of the Khinjuk tree, called "Shahna," are dried and made into flour and eaten by the poor.

Plantago major L. (Plantaginaceae)

بارهنگ

Bārhang (Teh.); Tukhm-i-bārhang (Ham.); Bizr dinbil (Iraq); Bar-i-tang (Bal.); seeds of greater plantain.

Achundow; Ait.; Schl.; Boiss. 4: 878; Post 668; Ph. Ind. 3: 128; I.H.B.; Gilliat-Smith.

Field 6; W.H.M.M. 150913; K.B. 331.

Greater plantain is widely distributed in temperate countries, and the seeds of this and other species are largely employed in medicine in the East. In Tabriz this plant is called in Turki Bizousha dishi, the female kind; *P. lanceolata* L. is distinguished as Bizousha erkek, the male kind. The seeds are small, oval, 1 mm. long, smooth, and brown. They throw off a transparent, mucilaginous coating when placed in water, on account of which the seeds have a reputation in treatment for affections of the bowels and as a remedy for dysentery. The colloquial name for the seeds in Iraq means "for making poultices for boils." The seeds of *P. Loefflingii* L. are called in Tabriz Karni Yarikh, meaning "healing of the stomach" (Gilliat-Smith).

Plantago ovata Forsk. (Plantaginaceae)

اسفرزه

Isparzah (Teh.); Asbaghul, Ispaghul (Pers.); Lesan ul Lamal (Ar.); Psylli semina (Ph. Pers.); Khar-danick (Bal.); spogul seeds.

Achundow; Schl.; Boiss. 4: 855; I.H.B.; Ph. Ind. 3: 126; B.P. 1914.

Field 7; W.H.M.M. 150707; K.B. 332.

This species of plantain is a native of Iran, Baluchistan, and northern India. Stocks observed that it was grown especially in Sind for its mucilaginous seeds, which from the time of Dioscorides

have been a well-known medicine in the East. Large quantities are imported into Bombay from Iran. The seeds are light in color, boat-shaped, pointed at both ends, 2 mm. in length, translucent, with a pinkish tinge, and a brown streak on the convex side; the concavity is covered with a thin, white membrane. They become coated with mucilage when placed in water. In Baluchistan the seeds of *P. ciliata* Desf. are called Isbaghol and are used as a cure for dysentery (Hughes-Buller).

—As an infusion the seeds are given for gonorrhea and any disease in which a cooling effect is desired; they are also used as a diuretic (H.F.).

Plumbago rosea L. (Plumbaginaceae)

شیطراج

Shītaraj, Rīshah tamesh (Teh.); Chitrak (Hind.); Chitra (Bom.); Chitraka (Sans.); leadwort root.

W.H.M.M. 150805; K.B. 332.

There are two kinds of plumbago roots known in the East, Indian and Syrian. The root from Tehran is dark reddish brown, 3 mm. in diameter, longitudinally striated, slightly twisted, the wood in wedge-shaped bundles. The taste is acrid and biting. The juice of this plant is used by beggars to raise ulcers on their bodies so as to excite pity. Like other species of the genus, it is an active blistering agent. In India it is considered a powerful sudorific.

POISONS

The following are regarded in Iran as poisonous drugs:

Aristolochia longa	Root	Tehran
Croton Tiglium	Seeds	Hamadan
Datura Stramonium	Seeds	Hamadan
Datura Stramonium	Leaves	Tehran
Datura Stramonium	Leaves	Hamadan
Doronicum Pardalianches	Root	Hamadan
Gypsophila paniculata	Root	Hamadan
Hyoscyamus reticulatus	Seeds	Hamadan
Ipomoea hederacea	Seeds	Hamadan
Iris spuria	Rhizome	Hamadan
Onosma echioides	Root	Hamadan
Ricinus communis	Seeds	Hamadan
Strychnos Nux-vomica	Seeds	Tehran
Veratrum album L.	Rhizome	Hamadan
Withania somnifera	Root	Hamadan

Polygonum Bistorta L. (Polygonaceae)

ریشه انجبار

Rīshah-i-anjabār (Teh.); Anjabar-i-rumi (Pers.); Bikh-anjubaz (Punj.); bistort root.

Ait.; Post; Schl.; Boiss. 4: 1027; Ph. Ind. 3: 150.

Field 192; W.H.M.M. 150832; K.B. 333.

The rhizome sent under this name is nearly cylindrical, about 12 mm. thick, contorted, with thin rootlets below and scars above, reddish brown and wrinkled on the outside, with a ring of vascular bundles between the center and circumference. The root contains tannin and elongated grains of starch. Schlimmer states that bistort root comes to Iran from the U.S.S.R., via Astrakhan; the sample from Tehran came from Kermanshah. Dymock informs us that *P. vivipara* is a substitute for bistort in the Punjab. The root, being very astringent, is prescribed in cases of diarrhea and dysentery. In Kashmir the roots of *P. amplexicaule* Don, called Mānsarīl, are employed as a dye.

Polypodium vulgare L. (Polypodiaceae)

بسفایج

Bas-fāyij, "many footed" (Teh.); Basfaij (Ind. bazaars); polypody root.

Field 175; W.H.M.M. 150897.

The rhizome of the common polypody is dark brown and wiry, the surface is rugose and longitudinally fissured, presenting several horn-like tubercles or scaly projections, the remains of the stipes of the fronds. It is oval in outline, with an interior of dark or brownish red and resinous. The aroma is disagreeable and the taste acrid. This is a well-known drug described by Achundow and Schlimmer. The root is aperient, alterative, and deobstruent, locally used for intestinal indigestion and rheumatic pains, and as a purgative for bilious disorders.—It is also given mixed with *Zataria multiflora* Boiss. (H.F.).

Polyporus officinalis Fries (Fungi)

غاریقون

Ghārīgūn (Teh.); Gharekum (Hind., Bom.); Gharikun (Ind. bazaars); white agaric.

Field 176.

This agaric occurs on the oak and larch, and in sizes as large as a fist or a child's head; it is light, spongy, and friable, and is not easily powdered. The use of this fungus in medicine is of very ancient date. Avicenna insists upon the great efficacy of agaric as an alexipharmic. Mohammedan physicians closely follow the Greeks in considering that it removes all kinds of visceral obstructions and expels diseased humors. It is also a Chinese drug. The light, white, spongy interior is made into touchwood, spunk, or tinder, and was formerly used to absorb blood and secretions from wounds, etc.; hence the old name Fungus or Boletus Chirurgorum given to the plant.

Prosopis Stephaniana Kunth (Leguminosae)

خرنوبان

Kharnūbān, Kornub (Isf.); Shok (Ar.); Kunbut (Syr.); Chughak: "humpbacked, bent," applied to the contorted pods, Tukhm-i-jinjak (Ait.); the pods.

Field 403.

This is a loose, straggling, thorny shrub of the Caucasus, Syria, Iran, and northern India. The pods are brown or copper-colored, 4 by 1.5 cm., galled, swollen, and contorted, containing several oval, brown seeds separated by soft, spongy dissepiments. The pods are eaten by sheep, but the seeds pass through undamaged and germinate readily at the coming of the winter rains (G.). The pods and roots of the plant are regarded as astringent and are given for dysentery.

Prunus Amygdalus Stokes var. **amara** Baill. (Rosaceae)

بادام تلخ

Bādām-i-talkh (Teh.); bitter almonds.

Field 52A, 171.

The bitter almond tree, like the sweet, is a native probably of Iran and Asia Minor, and is indistinguishable in botanical characters. In form and appearance bitter almonds closely resemble Valencia almonds, but are usually smaller. They are employed in confectionery and for flavoring, but as the hydrocyanic acid yielded by them varies in quantity, they should be used with caution.—An ointment made of bitter almonds is applied to furuncles (H.F.).

Prunus Armeniaca L. (Rosaceae)

زرد آلو

The fruit: Zard ālū (Pers.); Mishmish (Iraq); Khūbani, with stones removed (Hind.); dried apricot.

The seeds: Hasta-i-zard ālū.

Field 30, 39 (Iraq); 108A.

The home of this tree is in the Caucasus region. Dried apricots are called Pating in Afghanistan, and Chuli by the Botes. Sheets of compressed apricot pulp are sometimes sold in the market as Qamr-ad-din. In this form the dried apricot preserves its flavor for an indefinite period; it can be used as required after soaking in water, when it swells into a nutritive paste like jam. This substance was one of the rations issued to Turkish soldiers during the War (G.). Apricot kernels, called Stigu in Afghanistan, are used as almonds.

Prunus Cerasus L. (Rosaceae)

هسته آلبالو

Hastah-i-ālbālū (Teh.); Karaz (Ar.); Kerasza (Hind.); cherry stones.

دم آلبالو

Dam-i-ālbālū(Teh.); cherry stalks or peduncles.

Field 144; W.H.M.M. 150810, 150860.

The sour or bitter cherry is a tree of western Asia and eastern Europe. The fruits are light brown, resembling those of the common cherry. The seeds contain kernels having the odor of bitter almonds, are nutritive and tonic and are used in confections. The cherry tree and other plum trees in Iran yield a useful gum called Sumgh alucha.—Cherry stones mixed with barley awns, and cherry stems, are given as an infusion for gonorrhea (H.F.).

Prunus domestica L. var. **Juliana** (Rosaceae)

آلوچه

Alūchah (Teh.); Anjar (Iraq); Halu zhgarh (Kurd.); Alucha (Hind.); prunes.

Field 268, 95A, 104A.

The dried plums are black, wrinkled, ovate, 20 mm. long, with a sweet, pleasantly acid pulp; the seed is 14 by 12 mm., the kernel has an odor of bitter almonds. On account of their acidity they are preferred for cooking, and are used for cleaning metal.

Prunus institia L. var. **bokharensis** (Rosaceae)

آلو

Alū, Alū-bokhara (Teh.); Bokhara plum.

Field 271.

The fruit is globular, sweetish, and acidulous, surface compressed and wrinkled, color reddish or brown, with an odor like that of dates. Inside, the fruit is an almond-like nut in a hard shell, containing a kernel resembling sweet almonds. These plums may be used in place of prunes in the preparation of confection of senna.

Prunus Mahaleb L. (Rosaceae)

حب المعلب

Habbu'l-ma'lab (Teh.); Hab-ul-mahaliba (Ar.); Paiwand-e-maryam (Pers.); perfumed cherry tree fruits.

Field 103 (Iraq); W.H.M.M. 150862.

This small tree occurs in Central Asia and Europe. The drug is found in the bazaars in two forms, the dried fruits and the kernels. The fruits are drupes, brown and oval, 9 by 6 mm., with a wrinkled skin, covering a fragile shell and the kernel. The kernels are light brown in color, ovate, 6 by 4 mm., with the taste of bitter almonds. They are used by Arabian physicians as a stomachic and for general debility.

Pterocarpus santalinus L. (Leguminosae)

صندل سرخ

Sandal-i-surkh, Rātiyanah (Teh.); Lal-chandan (Hind.); Ratanjali (Guz.); red sanders, red sandalwood.

Field 193, 232.

This wood is the Rakta chandana of Sanskrit writers. It comes from southern India, where the felling of the trees is under government control, and yields a considerable revenue. Hindus and Mohammedans use this wood combined with white sandalwood in bathing and religious services. The use of the red wood in powder for treating bloody fluxes must be based on the "Doctrine of Signatures." The drug called Rātiyanah in Tehran, a remedy for dysentery, appears to consist of chips of this wood. Red sandalwood is well known in Europe as an ingredient in French polish.

Punica Granatum L. (Lythraceae)

گلنار فارسی

Gulnār-i-farsī, Gul-i-anār (Teh.); Nar (Turk.); Gul nare-farci (Schl.); Flores Punicae granati (Ph. Pers.); pomegranate flowers.

Achundow; Ait.; Post; I.H.B.; Fl. Br. Ind. 2: 581; Ph. Ind. 2: 45; Boiss. 2: 736.

Field 77, 157; W.H.M.M. 150738; K.B. 333.

ریشه انار

Root bark: Rīshah-i-anār (Teh.); Granati Cortex (Ph. Pers.).

Field 184.

Seeds: Chab roman (Bagh.).

Field 98A.

The pomegranate is a small tree with showy, reddish flowers, growing in subtropical countries. The flowers, rind of fruit, and dried bark of the stem and root are medicinal. The flowers are astringent and stomachic; the rind of the fruit is also astringent and is used for dyeing and prescribed for dysentery; the root bark is vermifuge and used for expelling tapeworm; the alkaloid pelletierine is its active principle.—The flowers, powdered with *Nummulites* sp. and *Rhus coriaria* L., are applied to painful gums.

Imm-harmal is a variety with small, black fruits which are used medicinally only (H.F.).

Pyrethrum sp. (?) (Compositae)

Katek bah (?) (Teh.).

K.B. 333.

This drug consists of a tapering root with a few undeveloped leaves arising from the crown. The root has the characters of a composite and the leaves resemble those of a *Pyrethrum*.—The sample is marked "Poison, used as an eye medicine" (H.F.).

Pyrus Cydonia L. (Rosaceae)

تخم بهدانه

Tukhm-i-bihdānah (Teh.); Bibi (Bal.); quince seeds.

Field 5; 53A.

The quince is a native of Central Asia, and is grown for its fruit in most temperate countries. Seeds used in and exported from Iran are irregularly ovoid, angular, adherent to one another by mucilage, and covered with a membrane; the color of the testa is dark brown, and that of the kernel yellowish white; they have the odor and taste of bitter almonds. When roasted and salted they are called Hab-safarjal. The seeds contain a large quantity of mucilage, which favorably recommends them as nutritive, demulcent, and emollient for coughing and dysentery; they are taken in the form of an infusion.

Quercus infectoria Olivier (Fagaceae)

مازو

Māzū (Isf.); Affaz (Teh.); Ajees-aafs (Ar.); Maiphala (Hind.); galls, mad, or Dead Sea apples.

Field 45A, 447; W.H.M.M. 150783.

These galls are excrescences on the twigs of oak trees, resulting from the deposition of eggs of *Cynips gallae-tinctoriae* Olivier. Oak galls are collected in Asiatic Turkey, as well as in the province of Aleppo, and are known commercially as "Aleppo," "Smyrna," or "Turkey" galls. They are nearly spherical in shape, and vary from 12 to 20 mm. in diameter, bluish green externally and yellowish within. They are hard and heavy, and bear short, bluntly pointed projections. The galls contain from 50 to 70 per cent of gallotannic acid, and consequently are used medicinally as a local astringent, to be dusted on wounds. They find an extensive application technically in dyeing and tanning.—In Kurdistan they are sometimes strung as beads and hung over the cradle to ward off the Evil Eye (H.F.).

Quercus lusitanica Lam. var. **tauricola** (Fagaceae)

Talkak (?) (Iraq); Basra galls.

Field 102, 120 (Iraq).

These galls are formed by *Cynips insana* Mayr. on the above oak, and also on *Quercus infectoria*. They are much larger than Aleppo galls, dark brown, oval or subspherical, 4 by 3.5 cm., yellowish brown within, a channel leading to the cavity in the center. They are very astringent and rich in tannic acid.

Quercus persica Jaub. & Spach (Fagaceae)

بلوط

Balūt (Teh.); Glans Quercus Ballotae (Ph. Pers.); acorns.

Field 191; W.H.M.M. 150834.

This is one of the most common species of oak throughout the forests of Kurdistan and the Rowandiz area. The acorns are oblong, 3.5 by 1.7 cm., light brown in color, glabrous, shining, and contain a single seed. Acorns have a styptic action because of the tannin they contain; they are used for colic pains in children, and as a gargle. —In Kurdistan acorns are sometimes eaten raw, but they are usually roasted and the flour made into cakes (H.F.).

Quercus sp. (Fagaceae)

Giash mashi (Ham.); Kisa, Kesa; spiny galls.

Pharmacog.; Connold's British Oak Galls; Houard 375; Ait.; Ph. Ind. 3: 360.

K.B. 334.

These galls are produced by the insect *Andricus lucidus* Hartig. var. *orientalis* Trotter (illustrated in Connold's "British Oak Galls"). This cynipid makes galls on various species of oak. The bazaar specimens are probably brought from Asia Minor; they have long spines which are usually broken off in the commercial samples. They are used by tanners and are sold also as an astringent medicine. This drug is given locally as a febrifuge (C.).

Quercus Vallonea Kotschy (Fagaceae)

كوزى علفى

Gueze elefi, Pune (Teh.); oak manna.

K.B. 334.

Under these names is supplied a confection or cake of sugary substance, green with the presence of broken leaves. It is a form of Tar-anjubin, "green honey," or Gaz-anjabin, "tamarisk honey." Layard referred to this substance in his "Early Adventures in Persia," I, p. 349: "The mountainous country beyond Fellaut is thickly wooded with the 'beloot' or oak. These trees are chiefly valuable for the white substance called by the Bakhtyaris 'gaz' or 'gazu,' a kind of manna. It is an article of export to all parts of Persia, and is sold everywhere in the bazaars, and employed in the manufacture of a sweetmeat called 'Gazenjubeen,' which is much relished and considered very wholesome. When boiled with the leaves and allowed to harden it forms a kind of greenish cake, not disagreeable to the taste, but, prepared for the use of the ladies of the enderun and to be offered to guests, it is carefully skimmed and separated, when it becomes a white paste of very delicate flavor."

Oak manna, manna quercina, Gueza-elefi of Schlimmer, has also been obtained from the leaves and fruits of *Q. mannifera* Lindl. of Kurdistan, *Q. persica* Jaub. & Spach, and *Q. tauricola* Klotszch. Saccharose, glucose, fructose, and mucilage have been separated from these secretions, but no mannite.

Quisqualis indica L. (Combretaceae)

Rangan-ki-bel (Hind.); Liane vermifuge (Fr.); fruits of the Rangoon creeper.

Field 82 (Iraq).

The Rangoon creeper is cultivated as an ornamental flowering shrub in most parts of India. The fruits are oval or oblong, pointed at either end, and sharply pentagonal. The pericarp is thin, woody, fragile, of a mahogany color, enclosing an oily seed. The medicinal use of the creeper originated in Mauritius and the Moluccas. The seeds are valued as an anthelmintic; four or five seeds bruised and mixed with honey are administered as a dose for expelling lumbrici.

Raphanus sativus L. (Cruciferae)

طربچه

Tukhm-i-turubchah (Teh.); Turb (Pers.); Bazr-el-fujl (Ar.); Tur (Kurd.); Mula, Muro (Hind.); radish seeds.

Field 37; W.H.M.M. 150921.

The well-known radish is cultivated as a vegetable throughout the country. Its seeds, sold in the bazaars, are oblong, 3 to 4 by 2 mm., light reddish brown, with the testa minutely reticulated. They have the pungent taste of mustard. The seeds are diuretic, laxative, and lithontriptic.

Rheum palmatum L. (Polygonaceae)

ریوند چینی

Rīvand-i-chinī (Isf., Teh.); rhubarb root.

Field 7 (Isf.); 1, 206.

The appearance of sticks of Chinese rhubarb in the bazaars of Iran indicates the favor in which this medicine is held. It is aperient, stomachic, tonic, and slightly astringent, and promotes the action of the liver without any catharsis.—In Tehran it is used as a paste for syphilitic ulcers (H.F.).

Rheum Ribes L. (Polygonaceae)

گل لیواس

Gul-i-livās, Tukhm-i-livās (Ham., Teh.); Livās, the Persian and Arabic name of the plant; Riwas (Punj.); rhubarb fruits.

Barg-i-livās (Isf.); rhubarb leaves.

Boiss. 4: 1003; Ph. Ind. 3: 153.

Field 22, 400; W.H.M.M. 150885; K.B. 335.

The edible rhubarb is indigenous throughout the moister localities at 3,000 feet and upward. It occurs in great expanses on a northern exposure on the higher hills of Khurasan, marking the country characteristically in the autumn with the brilliancy of its almost

scarlet foliage. The fruit and root-stock of wild rhubarb are collected and employed in medicine; the fruits were official in the "Pharmacopoeia Persica." A decoction of the reddish, triangular-winged fruits is considered a more powerful purgative than that of the rootstock (Aitchison). The fruits are used in Tehran as a vermifuge for horses, and in Hamadan the drug is applied as a poultice for headache. The rhubarb leaves from Isfahan are made into an infusion and used for gonorrhea (C.).

Rhodymenia sp. (Florideae, Rhodymeniaceae)

لیقا

Lyka, Leeka (Iraq); Chinai-ghasa or seaweed.

Field 31A.

This alga, obtained in northern Iran, is light brown and gelatinous. A decoction is given for coughs. As a substitute for agar-agar, it is emulcent, emollient, and alterative, and may be used as a cultivating medium for bacteria.

Rhus coriaria L. (Anacardiaceae)

سماق

Summāq, Summāq-i-shakki bī hastah (Teh.); Tirsh (Kurd.); Tartak (Hind.); leaves, bark, and fruits.

Achundow; Schl.; Boiss. 2: 4; Post; Ait.; Ph. Ind. 1: 373.

Field 164, 272; 107 (Iraq); W.H.M.M. 150800; K.B. 335.

The sumac is a tree cultivated in Khurasan, western Afghanistan, and throughout Central Asia. The leaves have long been used by the Arabs, Turks, Iranis, and in Europe, for dyeing silk and tanning leather. They contain from 15 to 35 per cent of tannin.

The fruit is exported from Iran and used by Mohammedans in India. It is a small, sticky drupe, the size of a lentil, 5 mm. in diameter, red or green, acid, and astringent to the taste, containing one lenticular, polished, brown seed.

—Mixed with *Punica Granatum* L., sumac is applied to relieve painful gums. The seeds in an infusion are used to acidulate foods (H.F.).

Ricinus communis L. (Euphorbiaceae)

گرچک فرنگی

Garchak farangī (Teh.); Karchak (Ham.); Tochme Kertchec (Schl.); Kurwa (Ar., Iraq); Bedanjir, "willow fig"; castor oil seeds.

Field 264; 4, 12, 36, 53 (Iraq); W.H.M.M. 150739; K.B. 335.

The castor oil plant is a native of India, but is common now throughout tropical and subtropical countries. In Iraq and Iran it is cultivated as a windbreak for cotton and other summer crops and in gardens as an ornamental plant. It may attain a height of 10 meters and be a perennial tree, but in cooler climates it is either a shrub or an annual herb. With variations of the plant there are also varieties, large and small, of the seeds. The four samples from Iraq were classed as follows: "Abhangi seeds" 15 by 9 mm., "ordinary" 13 by 10 mm., "Indian red-stemmed" 11 by 8 mm., "Syrian Baladi" 13 by 11 mm. The most important constituent of castor seed is the fixed oil, which exists to the extent of about 50 per cent. The oil is used as a lubricant, as an illuminant, and in medicine as a safe purgative. The oil cake contains all the poisonous property originally present in the seed, hence can not be used as a cattle food; it is, however, an excellent manure and fuel.

Roccella Montagnei Bél. (Ascolichenes, Roccellaceae)

دوالہ

Davālah (Ham.); a lichen.

Field 28A; W.H.M.M. 150824; K.B. 336.

Achundow refers this drug to *Muscus arboreus*, and gives the Persian names as Dawalak and Karbasu and the Arabic name as Aschna (*Usnea* sp.). The Persian name Davālah is applied to more than one kind of lichen, since Dymock gives *Parmelia kamtschadalis* Esch. as the source of this drug in the Indian bazaars (Ph. Ind. 3: 627). In the Field collection from Baghdad, No. 28A, this drug occurs under the name of "Lihayat as-shāyib." Some of the Parmelias are used as a dye. They are gray lichens, in broken pieces, having emollient and astringent properties, used in a bath or as a poultice.

Rosa damascena Mill. (Rosaceae)

گل سرخ

Gul-i-surkh, "red flower" (Teh.); Ward (Ar.); flowers of red rose.

Field 42A; W.H.M.M. 150763.

The rose of Damascus is largely cultivated in western Asia. In Turkey, Bulgaria, and the south of France this species yields attar of rose and is the flower from which the official rose water is prepared.

The petals are slightly astringent, and are used chiefly as an agreeable astringent or as a coloring agent. "Gulanjabin," of rose

petals mixed with honey, is a confection sold in Eastern bazaars. "Gulkhand" is a conserve made from equal parts of rose petals and white sugar beaten together.—Rose petals are added to curry as a flavoring (H.F.).

Rosa foetida Herm. (Rosaceae)

گل زرد

Gul-i-zard, "yellow flower" (Teh.); Gole zarde (Schl.).

A. Olivier ("Voyage dans l'Empire Ottoman, l'Egypte et la Perse," Paris, 1807); Boiss. 2: 671.

Field 154; W.H.M.M. 150823; K.B. 336.

The Persian yellow rose is a shrub cultivated in gardens. This is the yellow Austrian briar in a wild state, ranging from the Crimea and Asia Minor through Iran to Turkestan, Afghanistan, and the Punjab to eastern Tibet. Aitchison calls it Gul-i-raman-zeba, "lovely flower" of the Hari Rud Valley. Dried rose petals, obtained chiefly from Iran, are sold in the bazaars in India and are prescribed for colic and diarrhea.

Rosa hemisphaerica Herm. (Rosaceae)

دماوره

Damaverah (Ham.); Dalik, Ward (Ar.); the hips.

Ph. Ind. 1: 574; Boiss. 2: 672; Post.

K.B. 336.

This rose occurs in Iran and Afghanistan, and, according to Post, is cultivated extensively in Syria.

The drug consists of the hips of the plant. They are nearly globular, broader than long, from 10 by 7 mm. to 13 by 8 mm., crowned with the remains of sepals, red, wrinkled, and covered with short protuberances. Within are several light brown, hard, smooth seeds, 4 mm. long, mixed with silky hairs. The fruits are hot, dry, and astringent, and are given locally for stomach complaints.

Rubia Cordifolia L. and **R. tinctorium** L. (Rubiaceae)

روناس

Rūnās, Rūniyās (Teh., Isf.); Rounace (Schl.); Fuwwah (Ar.); Manjit (Hind.); madder root.

Ait.; Boiss. 3: 17; Post 224; Schl.; Ph. Ind.

Field 6 (Isf.); 39; 109 (Iraq); W.H.M.M. 150726; K.B. 336.

The madder plant is grown in hilly districts from Iran to Spain. Aitchison says it is cultivated throughout eastern Iran and it takes three years for the root to attain its proper size. It is grown extensively in Anar-dara, Koin, and Yezd, whence the root is exported in quantity to Herat. From Herat it is re-exported to Afghanistan, Turkestan, and India. The root is used as a dyestuff and medicine throughout the East. It is sold in two forms: one with the cylindrical, red roots in lengths of 1 or 2 inches; and the other with the crushed root made into balls ready for the dyer.

Rumex conglomeratus L. and **R. obtusifolius** L. (Polygonaceae)

تخم حماز

Tukhm-i-hummāz (Teh., Ham.); the fruits.

Boiss. 4: 1010; Ait.; Post; Ph. Ind. 3: 158.

Field 2, 37, 159; 123 (Iraq); W.H.M.M. 150842; K.B. 337.

The first of these widely distributed species of dock yields a medicinal root known to the ancients as Radix Lapathi, but in Iran and India this and other species afford medicinal fruits. Those from Tehran belong to *R. obtusifolius;* they have three wings, are net-veined, irregularly toothed, and red and green in color.—These are given as an infusion for dysentery (H.F.).

The fruits from Hamadan are from *R. conglomeratus* and have shorter wings, not distinctly toothed. They are given in pyorrhea. According to Dymock, Gul-i-hamaz, or "dock flowers," in India are afforded by the fruits of *R. vesicarius* L., a plant found all over Asia.

Ruta graveolens L. (Rutaceae)

سداب

Sudāb (Teh.); Sudaba (Ar.); Satari (Hind.); Peganon of Scripture; garden rue, herb of grace.

Field 170; 84 (Iraq); W.H.M.M. 150784.

This perennial herb is cultivated in southern Europe and the East. It is about 1 m. high, with glaucous foliage, yellow flowers, and small tricoccus capsules and black seeds. The odor is peculiar and mint-like, and the taste acrid and bitter. In the market the drug occurs as a mixture of broken leaves, stems, stalks, and fruits. Rue in small doses is a tonic, digestive, and aphrodisiac. In a fresh state it is an active irritant. Rue yields a volatile oil and a bitter, yellow glucoside, rutin.—Mixed with mast, it is applied to relieve itching (H.F.).

Saccharum officinarum L. (Gramineae)

شکر سرخ

Shakar-i-surkh (Teh.); sugar cane.

W.H.M.M. 150711.

This is a sample of crude sugar or Gur, a soft, saccharine mass, reddish in color, and very soluble in water. The unrefined, dark brown Guda of the Hindus was known to the ancient Persians, as well as Shakar from which the dry, crystalline sugar was made. At Leh there are five kinds of sugar imported: Tavi misri, flat cakes; Kusa misri, heavier cakes; Khand, soft brown crystals; Gur, coarse sugar; and Shahi or Kashi, sugar candy. The vernacular names Misri (Egyptian) for refined sugar, and Chini (Chin.) for sugar candy, indicate the comparatively recent introduction of these products into India and Iran.

Salix fragilis L. (Salicaceae)

بید خشت

Bīd-khisht (Teh.); Bid-anjubin, "willow honey" (Afg.); Bide Knecht (Achundow); willow manna.

Field 127; W.H.M.M. 150748.

A saccharine secretion afforded by a species of willow has been referred to by old writers on Eastern medicine. The drug occurs in small, dirty white lumps, resembling in taste the European manna obtained from the ash (*Fraxinus Ornus* L.) of Sicily. It is recommended for *Herpes labialis*, or thrush.

Salvia Hydrangea DC. (Labiatae)

Gul-i-arbore(?) (Teh.); Issikuttuz (Turk.); Sarsand (Bal.); the flowers.

Boiss. 4: 606; Ph. Ind. 3: 94; Kew Bull. 1930, 459.

K.B. 337.

This is a handsome flowering plant of Iran, Baluchistan, and Afghanistan. The drug consists of the mauve flowers with green-veined bracts and small, rounded, brown seeds. Dymock says it is allied to Jadeh, probably a *Teucrium*. The flowering tops of a *Moluccella*, having enlarged purple calyces and a balm-like odor, and the rose-colored, mucilaginous calyces of *Hymenocrater elegans* Br., are used in medicine in Iran under the name of Gul-i-serwaj. In Tabriz the inflorescence of *S. Hydrangea* is used for making a

medicinal tea.—In Tehran the drug is said to stop excessive menstruation (H.F.)

Salvia macrosiphon Boiss. (Labiatae)

تخم مرو

Tukhm-i-marv, Tukhm-i-anjurah—Anjurah is a Persian name for the mucilaginous seeds of Blepharis (Teh.); Kanocha, Marv (Isf.); seeds.

Field 136, 197; W.H.M.M. 150853; K.B. 338.

Schlimmer, Aitchison, and Dymock refer to species of sage used in medicine under the name of Kanocha. Stapf has shown that they are identical with those called Marv, and belong to the above species of *Salvia*, a plant of Afghanistan and Iran. The seeds are light brown or greenish, oval, lens-shaped, 3 mm. in length, the polished surface having wavy or branching markings. The seeds are mucilaginous when placed in water; they are used for debility.—They are also given to alleviate heart disturbances in pregnancy and phlegmasia after childbirth (H.F.).

The seeds of *S. aegyptica* L., called Maur in Baluchistan, are said to be a remedy for eye diseases.

Salvia sp. (Labiatae)

خردل شهری

Khardal-i-shahrī, Tukhm-i-khardal (Teh., Ham.); the seeds.

Field 252; K.B. 337.

Tukhm-i-khardal is the Persian name for mustard seed and the seed of *Salvadora persica*, but in the above two specimens seeds of a *Salvia* have been supplied. The seeds are rounded, 1 mm. in diameter, grayish brown, with a minute, round umbilicus; a transparent mucilaginous coating is formed when they are soaked in water. The seeds are prescribed with bitter medicines.

Santalum album L. (Santalaceae)

سندل سفید

Sandal-i-safīd (Teh.); white sandalwood.

Field 232; W.H.M.M. 150789.

These are pieces of the fragrant, white sandalwood of India. The important constituent of the wood is the volatile oil, of which it yields from 2 to 5 per cent. This contains about 90 per cent of the alcohol santalol. Sandalwood oil is used in perfumery, and in

medicine for its stimulant (irritant) and antiseptic action in the genito-urinary tract.

Saussurea Lappa C. B. Clarke (Compositae)

قسطخ

Qust-i-talkh, Butīnak (Teh.); Patchak (Beng.); Kutha Kushta patchuk (Hind.); Costum amarum (Ph. Pers.); Indian costus.

Ait.; Fl. Br. Ind. 3: 376; Schl.; Ph. Ind. 2: 296.

W.H.M.M. 150813; K.B. 338.

The soft, fragrant, whitish root comes from plants grown as a Crown monopoly in Kashmir, and is exported to Iran, India, and China. This ancient and valuable drug was called Arabian costus as it was carried to Turkey and Europe by the Arabs. The root occurs in cylindrical or twisted pieces, light colored, with an agreeable odor and a bitter and biting aftertaste. A second sample of Kust from Hamadan was a smaller root, spirally twisted and lighter in color. Chob-i-kut is the name of a plant used to adulterate costus root in Afghanistan. Various chemical principles have been separated from the root, some of which account for the violet-like odor: Costulactone isomeric with alantolactone costus acid, dehydrocostus lactone, and costol. Costus root is prescribed externally and internally for various complaints, and is taken locally to ward off the effects of snake and animal bites.

Semecarpus Anacardium L. (Anacardiaceae)

بلادر

Balādur (Teh., Isf.); Bhela, Bhilava (Hind.); marking nut.

Field 439; W.H.M.M. 150873.

The marking nut tree inhabits the hotter part of India, Ceylon, and Burma. The black, obliquely cordate nuts contain within the pericarp a black, resinous, viscid, acrid juice which is used as marking ink. A local caustic and vesicant, the juice, when applied to the skin, causes intense pain and swelling. In small quantities, it is given for relief in rheumatic pains and leprous affections.—Prepared like tea, it is also taken to relieve flatulence following severe piles (H.F.).

Sesamum indicum L. (Pedaliaceae)

سمسم

Simsim (Iraq); Kunjad (Kurd.); Kundij (Turk.); Til, Jinjili, Gingelly (Hind.); til or sesame seed.

Field 128A, 52 (Iraq).

Sesame is widely cultivated as a summer crop. The seeds, white, brown, or black, are used for garnishing cakes and sweetmeats and are eaten by the poor in times of scarcity. They contain about 50 per cent of a fixed oil which is an excellent substitute for olive oil or other salad oil in cooking. The oil cake is a cattle food. The oil is also the basis of most of the fragrant or scented oils—medicated oils prepared with various vegetable drugs.

In Baghdad, Rashi is the name given to a preparation of ground sesame seed after it has been soaked and roasted, which is used as an emollient, Rahishi (Ar.), Arwah-i-kunjad (Pers.).

Sesbania aculeata Poir. (Leguminosae)

Sesbaniyah (Iraq); Saisaban (Egy.); Rasin (Hind.); Akar, Majandri (Bal.); Jayanti (Beng.); Sesbania seeds.

Field 47 (Iraq).

The plant has been introduced into Iraq and planted for windbreaks. The seeds are sold in bazaars throughout India and Iran. They are dull grayish brown, oblong, 2 by 4 mm., smooth, hard, and bitter to the taste. The Hindus have a superstition that sight of the seeds will remove the pain of scorpion stings. They are used medicinally on account of their astringent properties. The seeds are beaten into a paste which is applied locally to cure eruptions.

Sisymbrium Sophia L. (Cruciferae)

خاکشیر بن

Khākshīr, Khākshīr-i-shīrīn (Teh.); Towdri, Khub-kalan, Khaksi (Hind.); the seeds.

Ait.; Schl.; Boiss. 1: 216; Ph. Ind. 1: 118, 121.

Field 4 (Isf.), 50; W.H.M.M. 150712.

These seeds resemble in size, shape, and color the drug Tukhm-i-khākshīr talkh, the bitter Khākshīr (*Erysimum* sp.), except that they are dull and not shiny. There are several kinds of cruciferous seeds known as "Towdri": pale, light brown, red, and black. The seed of *Lepidium Iberis* L., the Kasis of Iran, is one of them, and the seeds of *Matthiola incana* R. Br., from the Punjab and Sind, is another. The seeds are small, yellowish brown, 1 mm. in length, and become coated with transparent mucilage when placed in water. The drug is considered aphrodisiac, "fattening the body and purifying the blood."

—Taken with a little sugar and cold water it is a remedy for nausea, or is given in hot water for stomach pains; it is said to be harmless, even for children (H.F.).

Smilax China L., and **S. glabra** Roxb. (Liliaceae)

چوب چین

Chūb Chīnī (Ind. bazaars); Tu fu ling (Chin.); Raiz de China (Port.); Tuber Chinae; China root, Chinese sarsaparilla.

Schl.; Laufer 556; Colloquios; Ph. Ind. 3: 500.

W.H.M.M. 150773; K.B. 338.

This root was once a famous remedy for the treatment of Morbus americanus (syphilis), and was first introduced into Europe by the returning sailors of Columbus, and into India by the sailors of Vasco da Gama. It is mentioned by Indian writers of the 16th century. Garcia da Orta traced the source of the drug to China and records a cure made in 1535. It was soon afterward introduced into Iran by the Portuguese. Saponin was found in the root by Kobert in 1911, but its therapeutical action is not considered very marked.

Solanum nigrum L. (Solanaceae)

تاجریزی

Tāj-i-rīzī (Teh.); Inab-ath-thalab, "fox's grapes"; Inab-ed-dib (Ar.); Karezgi (Bal.); black nightshade, wonderberry.

Achundow; Boiss. 4: 284; Ph. Ind. 2: 550; I.H.B.

Field 130A, 414; W.H.M.M. 150722; K.B. 339.

This species of *Solanum* is a common weed in Iran, where the leaves are eaten as spinach, and the small, black fruits with yellow seeds are medicinal. The berries are eaten by the country people (G.). The Bote women employ the fruit as a cosmetic; they stick the fresh seeds on their cheeks to remove freckles and improve the complexion.

—Mixed with violet flowers, *Nymphaea alba* L., jujube, sebestan, and sugar, the fruits of *S. nigrum* are prepared like tea to soften the feces before giving a purgative, especially in typhoid fever (H.F.).

The fruits of bittersweet (*S. Dulcamara* L.), under the name of Sag-anjar, "dog's grapes," are among the drugs exported to India. They are considered laxative and are employed in chronic enlargement of the liver.

Solanum xanthocarpum Schrad. & Wendl. and **S. Melongena** L. (Solanaceae)

تخم باد نجان

Tukhm-i-bādanjān (Teh.); seeds of the wild eggplant.

Field 261.

These plants occur throughout India. The stem and leaves are armed with strong prickles; the flowers are in racemes; and the berries are spherical, smooth, and marked with variegated, green and yellow stripes. The seeds are reniform, 2 mm. in diameter, compressed, and light brown in color. They are expectorant in asthma and catarrh.

Sorghum vulgare Pers. and **Andropogon Sorghum** Brot. (Gramineae)

دهوره

Dhurah, Idhrah baidha (Ar.); Dari, Gowar (Hind.); Baryadh dari (Turk.); Zuratspi (Kurd.); great millet.

Field 111 (Iraq).

Giant millet is cultivated extensively as an irrigated summer cereal crop in the riverain areas between Basra and Mosul. During the past few years there has been an annual export of grain from Iraq amounting to between 30,000 and 50,000 tons. The grain is well liked by the people as a food (G.).

Spinacia oleracea L. (Chenopodiaceae)

تخم اسپناج

Tukhm-i-ispanāj (Teh.); Ispinākh (Iraq); Sag Palak (Hind.); spinach seeds.

Field 45; W.H.M.M. 150912.

Spinach is cultivated in kitchen gardens in Iraq and Iran for its large, fleshy leaves which are eaten as a vegetable. It is sometimes confused with spinach beet (*Beta vulgaris* var.), which is much used as a substitute for spinach. The fruits are in green clusters, triangular, each angle terminating in two or more spines, the surface rugose and wrinkled. The fruits contain mucilage and alkaline nitrates, and are demulcent and diuretic, employed for fever and inflammation of the bowels.

The seeds of *Chenopodium capitatum* Aschers. are also sold under the above vernacular names.

Stachys germanica L. (Labiatae)

Tuklejah(?) (Ham.); the flowers.

K.B. 339.

This woolly plant and its varieties are found in the Caucasus and in Europe. The drug consists chiefly of the sub-oblique, five-toothed calyces covered with tomentum, having the remains of flowers and stalks. It is given to relieve stomach disorders.

Stachys lavandulaefolia Vahl (Labiatae)

مرز نجوش

Marzanjūsh (Tab.); Mardan gusht, "men's ears"; Sansaq (Ar.); the leaves.

Achundow; Ait.; Ph. Ind. 3; Gilliat-Smith and Turrill, Kew Bull. 1930, 459.

W.H.M.M. 150833; K.B. 339.

This species of *Stachys* with purple flowers is found in Asia Minor, the Caucasus, Kurdistan, and Iran, and is one of the sources of an ancient Persian drug. Marjanjūsh is referred by Achundow to *Origanum Majorana* L. We can confirm Dymock in identifying it with *Zataria multiflora* Boiss. (q.v.), a plant which in India merits the appropriate indigenous name of Zatar. Gilliat-Smith remarks that the inflorescence is sold in the bazaars of Tabriz, and is made into an infusion for relieving spasms and stomach disorders.

Strychnos Ignatii Berg. (Loganiaceae)

پا پتیال

Pāptiyāl (Teh.); Papita (Ar., Hind., Bom.); Ignatia Amara; St. Ignatius' bean.

W.H.M.M. 150864.

These seeds from the Philippine Islands are in general use in drug shops in the East. They are ovoid, triangular or bluntly angular, and about an inch in length; the horny albumen is intensely bitter and contains the alkaloids strychnine and brucine. In native practice preparations of the seed are used in plague and other infectious diseases and in intercostal neuralgia.

Strychnos Nux Vomica L. (Loganiaceae)

کچوله

Kuchūlah (Teh.); Fuluz mahi (Pers.); Kuchila (Hind.); nux vomica, seeds.

Ait.; Schl.; Ph. Ind. 2: 459; Fl. Br. Ind. 4: 90.

W.H.M.M. 150816; K.B. 339.

Nux vomica or Kuchula seeds are frequently referred to in ancient Persian works. In the "Makhzan el Adwiya" they are said to have been used from very early times for paralysis. Called Azaraki by Indian Mohammedans, they are given for debility. The seeds are imported from India, and are known throughout Iran as a poison. Aitchison says, "The seed of the nux vomica is imported freely into these parts (northeast of Iran) as a valuable tonic, but it is chiefly employed by the nomad tribes for poisoning wolves and dogs, these animals frequently proving destructive to their flocks."

Tagetes erecta L. (Compositae)

گل جعفری

Gul-i-ja'farī (Teh.); Ja'fari (Iraq); Gul gaindo (Bal.); Gul-jaferi (Hind.); Rojia (Port.); African marigold.

Field 86.

Both the African marigold and the French marigold (*T. patula* L.) are cultivated in flower gardens for their orange-yellow blossoms and scented foliage. They were probably introduced into India by the Portuguese. The flowers are often worn as garlands during religious festivals. Sold in the bazaars in India and Iran, the dried flower heads are said to purify the blood.

Tamarindus indica L. (Leguminosae)

تخم تمر

Tukhm-i-tamr (Teh.); Baz-i-tamar-hindi (Ar.); seeds of the tamarind.

Field 262.

The seeds of the Indian tamarind tree are dark brown, shining, flattened, of an irregular outline, containing ivory-white cotyledons. Size is made from the seeds, and it appears that this preparation is used in Tehran as a plaster for boils (see "Tamarind Seed" by D. Hooper, *Agricultural Ledger*, No. 2, 1907).

Tamarix gallica L. var. **mannifera** Ehrenb. (Tamaricaceae)

گز خونسار

Gaz-i-khūnsār, Gaz-alafi, Gaz-anjabin, "tamarisk honey" (Teh.); Gaz-i-shakar, "tamarisk sugar"; tamarisk manna.

Ph. Pers.; Ait.; Boiss. 1: 778; Ph. Ind. 1: 161.

Field 13; W.H.M.M. 150881; K.B. 340.

Aitchison collected in the Badghis samples of manna from this variety of *Tamarix*, which the natives distinguished from the ordinary species, *T. gallica*. The saccharine exudation of these plants is said to be collected only in southeastern Iran, in the district of Kerman, where small galls also are formed on the leaves. In other parts of Iran Gaz-anjabin is obtained from other species of tamarisk (see *T. pentandra*). Ehrenberg believes the sugar to be formed as a result of the punctures of *Coccus manniparus*. The sample from Tehran is a dried cake of confection wrapped in silver paper, probably a mixture of the manna with ordinary sugar.

Tamarix pentandra Pall. (Tamaricaceae)

گز مازج

Guezmazedj (Teh.); Guize khouncar, Hebbel asle (Schl.); manna.

Tamarisk Manna, D. Hooper, Jour. As. Soc. Bengal, n.s. V, 1909, 31–36; Boiss. 1: 773.

K.B. 340.

The various species of tamarisk are the commonest shrubs or small trees found from Quetta to Balamtghab, and from Herat to Meshed, up to 3,000 feet. At least six species are widely distributed in Baluchistan, and two of them, *T. articulata* Vahl (Siah gaz) and *T. pentandra* (Shingir gaz), have been observed to yield a sweet gum. The latter is known to give large quantities of this saccharine secretion in the Helmand. The samples are similar; they are sweet, sticky, transparent, quite soluble in water, and become hard and opaque when kept, owing to the crystallization of the saccharose.

Taxus baccata L. (Taxaceae)

زرنب

Zarnab (Isf.); Barambi, Talispatra (Hind.); Himalayan yew.

Field 430.

Zarnab is an Arabic name for an odoriferous drug and plant quoted by old writers on Eastern materia medica. The drug has been referred to various trees of the pine and fir group, particularly the yew and *Abies Webbiana* Lindl. (Ph. Ind. 3: 375). The present drug appears to consist of the staminate inflorescence of the yew, but other recorded specimens are mixtures of the leaves, branches, and

bark of a conifer. The drug is regarded as antispasmodic and is given in asthmatic affections.

Terminalia bellerica Roxb. (Combretaceae)

بلیله

Balīlah (Teh., Isf.); Balera (Hind.); Belleric myrobalans.

Ph. Pers.; Schl.; Ph. Ind. 2: 5; Fl. Br. Ind. 2: 446.

Field 424; K.B. 340.

This is an Indian tree, and because of its medicinal properties it bears the Sanskrit synonym Anīla-ghnaka or "wind killing." The belleric myrobalans of commerce are the fruits of this tree, and are imported into Iran from India. Mohammedan physicians regard them as astringent and digestive, and use them for making a lotion for sore eyes.—Myrobalans, mixed with cardamoms, are given in pills to cure general debility (H.F.).

Terminalia Chebula Retz. (Combretaceae)

هلیله سیاه

Halīlah-i-zard, Halīlah-i-kābulī, Halīlah-i-siyāh (Teh., Isf.); Har, Hara (Hind.); Hirda (Bom.); Haritaki (Beng.); Chebulic myrobalans.

Ph. Pers.; Schl.; Fl. Br. Ind. 2: 447; Ph. Ind. 2: 1.

Field 19, 407, 417; W.H.M.M. 150777; K.B. 341.

Myrobalans were known to the early Arabian and Greek writers, and several kinds were described. At the present time two varieties are found in every Eastern bazaar: (1) the young, unripe nuts which turn black on drying, Halīlah-i-siyāh or black myrobalans; and (2) the mature nuts, which are larger and yellowish in color, called Halīlah-i-zard or Halīlah-i-kābulī. The first kind is used chiefly in medicine, and many fanciful properties are attributed to it.—Powdered and made into pills it is used as a strong purgative and to relieve stomach pains (H.F.).

The yellow myrobalans contain about 30 per cent of tannin and are employed as a tanning agent.

Teucrium Polium L. (Labiatae)

مریم نخودی

Maryam nukhūdī, "peas of Mary" (Teh.); Ja'ad (Iraq); Meriam Nekhodi, according to Schlimmer, is the Tehran name for *T. scordioides* Schreb. The Merian gole of the "Terminologie" is referred to

Salvia officinalis L., but according to Gilliat-Smith, this plant, although cultivated in gardens in Tabriz, has no local name and is not used by the natives.

Boiss. 4: 821; I.H.B.; Ph. Ind. 3: 125.

Field 130; W.H.M.M. 150799; K.B. 341.

This plant is the poley germander or polion of the Greeks. The drug consists of the small, woolly flowers, mixed with some stalks and leaves. It has the fragrance of thyme, and is given as an infusion for internal disorders—to relieve pains during pregnancy (H.F.). In Baluchistan *T. Stocksianum* Boiss. is called Kalpora, and is a remedy for fever.

Thea sinensis L. (Theaceae)

چای سبز

Chā'ī sabz (Teh.); Chā (Hind.); green tea leaves.

W.H.M.M. 150820.

A sample of prepared green tea. Tea is imported in immense quantities, chiefly from southern Iran and India. Iranis are very fond of this beverage; prepared tea is sold in nearly every bazaar.

According to Laufer (pp. 553–554) "in Mongol, Turkish, Persian, Indian, Portuguese, neo-Greek, and Russian we equally find the word *čai*, based on North Chinese *c'a*. The Tibetans retain the Chinese word in the ancient form *ja* (*dža*)."

Thymus Serpyllum L. var. **Kotschyanus** Boiss. (Labiatae)

کوشان شیرازی

Jōshan Shīrāzī (Teh.); Zatār (Syr., Iraq); Seetere (Schl.); Djūshā (Pers.); the herb.

Ait.; Boiss. 4: 556; Post; Schl.; Fl. Br. Ind. 4: 649; Ph. Ind. 3: 114.

Field 75A; K.B. 341.

This variety of thyme is a plant of Iran and Kurdistan. The leaves are rounded, cuneate, ovate to lanceolate, with prominent nerves below. The leaves are fragrant, and resemble those of *Zataria multiflora* Boiss., a plant which also has the name of Zatar. Post applies the name Zatar to all plants of the genus *Thymus*. Boissier, on the other hand, refers Zatar to *Origanum Maru* L., Zatar farisi to *T. capitatus* L., and Zaeteran to *T. decussatis* Boiss. It would thus appear that Zatar and Jōshan Shīrāzī are similar drugs, characterized by a thyme-like aroma. The leaves are carminative.

Tilia rubra DC. (Tiliaceae)

برگ تیول

Barg tiol (Teh.); floral leaves of the lime tree.

W.H.M.M. 150713.

The flowers of this Eastern lime or linden are not elsewhere referred to as medicinal, but are probably, like other plants of this genus, given for their mucilaginous and demulcent properties. The flowers of the European lime (*Tilia europaea*) are prescribed for catarrh and nervous complaints.

Trachydium Lehmanni Benth. (Umbelliferae)

شقاقی

Shagāgī, Shekakul (Teh.); Chakha-khoul (Turk.); Chighaghole metri (Schl.); parsnip of the desert, root of wisdom.

Schl.; Post 368; Boiss. 2: 891; Ait.; Ph. Ind. 2: 136.

W.H.M.M. 150869; K.B. 342.

The roots of this and other umbelliferous plants are collected in Afghanistan and Iran and exported to India as a medicine. The root, the shape and size of a small carrot, is about 1 inch in diameter at the thicker end, tapering to a point. Internally it is white, starchy, friable, and sweetish to the taste. It is considered very valuable as a diet for improving the memory and increasing brain power. The name is applied to other stimulating roots eaten by women to increase their embonpoint. The roots of *Caucalis, Pastinaca, Eryngium,* and *Eremodaucus* are drugs of this class used as food for invalids.

Trachylobium Hornemannianum Hayne (Leguminosae)

سندلوس

Sandalūs (Ind. bazaars); gum copal.

W.H.M.M. 150742.

This resin of African origin is too well known as an article of commerce to require description. As a drug it is used in native practice as an astringent, anthelmintic, diuretic, and emmenagogue. Made into ointment it is applied to wounds to promote granulation.

Tribulus terrestris L. (Zygophyllaceae)

خار خسک

Khār-khasak (Teh.); Hasach (Iraq); Chota gokhru (Hind.); Tribolia (modern Gr.); small caltrops.

Achundow; I.H.B.; Fl. Br. Ind. 1: 423; Ph. Ind. 1: 243.

Field 253; W.H.M.M. 150849; K.B. 342.

This plant is found in the sandy deserts of northwestern India, where the fruits are collected for the market. As a drug it is mentioned by Dioscorides and Pliny and in the Bower manuscript. The fruit, the size of a small bean, has five cells, each of which is wedge-shaped and armed with four strong prickles. The seeds are oily and enclosed in hard, stony cells. The fruits are diuretic and are said to act as a charm in bladder troubles. Dulm-ul-hasak and Rughan-i-char-i-chesak are names for an oil prepared from the fruits and applied to relieve rheumatism.—Small caltrops are given as an infusion for gonorrhea (H.F.).

Trifolium alexandrinum L. (Leguminosae)

برسيم

Barsim (Iraq); seeds of berseem or Egyptian clover.

Field 31, 51 (Iraq).

This is a well-known fodder and green manure. Experiments have shown that it can be grown satisfactorily as a winter crop. The seeds are yellowish brown, smooth, oval, 2 mm. long.

Trifolium repens L. (Leguminosae)

تخم شبدر

Tukhm-i-shabdar (Teh.); Shaftal (Punj., Bal.); Nafal, Nifil (Iraq); white clover seed.

Field 29 (Iraq); W.H.M.M. 150902.

Clover or trefoil grows in northern India, at an elevation sometimes of 10,000 feet in the Himalayas. The seeds are oval, brown or green, and are used for making cooling poultices for boils.

Trigonella Foenum-graecum L. (Leguminosae)

تخم شنبليله

Tukhm-i-shambalīlah (Teh., Ham.); Hulbah (Iraq); the seeds.

Shambalīlah (Teh.); Methi (Hind., Bom.); the herb, fenugreek.

Ait.; I.H.B.; Boiss. 2: 70; Post; Ph. Ind. 1: 402.

Field 27, 71A, 213; 16 (Iraq); W.H.M.M. 150749, 150795; K.B. 343.

Fenugreek is cultivated universally in gardens as a potherb, and in Egypt and Afghanistan as a food and fodder crop. The leaves

are occasionally used for poultices and in curries. The seeds are mucilaginous and have been known since antiquity for their medicinal properties, which are stomachic and cordial.—As an infusion they are given for menorrhagia (H.F.).

Triticum vulgare Vill. (Gramineae)

گندم سفید

Gandum-i-safīd, Gandum-ābī (Teh.); Kanim (Kurd.); Gehun (Hind.); Godumai (Tam.); wheat grains.

Nishāstah (Teh.); wheat starch.

Field 160, 273; 9, 26, 27, 35, 40, 42, 49, 56 (Iraq); 57A, 58A, 59A, 60A, 61A, 62A.

Wheat is one of the principal winter crops grown in cultivated areas throughout the country. Herodotus (III, 22) mentions only wheat as the staple food of the Persians at the time of Cambyses. Modern Irani primitive physicians use wheat starch as a dusting powder to allay the pain of burns and inflammation.

Guest (p. 102) records the following information: "*Triticum* (Gramineae). Wheat. Hintah, Bughdāi (Turk.), Ganim (Kurd.). One of the two principal winter crops grown extensively in the cultivated areas throughout the country; the other is barley. There are several indigenous spp. and many hundreds of local varieties. Wheat is grown on irrigation in the riverain areas of Lower Iraq and, more extensively, on rain in the 'daim' areas of the upper plains; it is also grown in the valleys of Kurdistan (up to alt. about 2,000 m.). There is in normal years a considerable export of grain from Iraq, denoting a surplus above the requirements of the inhabitants. Formerly, the grain had a bad name in the trade owing to the dirt and other impurities which it contained; it was classed as 'Persian' and fetched a poor price in the world markets. Of recent years a great improvement has taken place in the cleanliness and quality of the grain exported from this country and it is confidently hoped to establish a name for Iraqi wheat. To this end legislation has recently been introduced to encourage the propagation of 'Ajībah wheat (one of the Punjab wheats), which was issued by the Department of Agriculture a few years ago after trials had proved it to be superior to any other local or imported variety.

"Bread Wheat, *T. vulgare* Vill. Almost the only kind of wheat grown on irrigation in the riverain areas of Lower Iraq. In certain years it suffers badly from rust disease which takes a heavy toll of

the crop. This is one of the reasons for the growing popularity of the newly-introduced 'Ajībah, a variety highly resistant to rust. A certain amount of bread wheat is also grown on rain in the 'daim' areas of the north, where it is known as Hintah Qandahārī (*N.*).

"Macaroni Wheat, *T. durum* Desf. Hintah Khushnah. Much the greater portion of the 'daim' wheat in the north is of this type. It gives a higher yield, has greater resistance to drought and is more immune to rust than the local bread wheats. The grain of this type of wheat is harder and larger than the grain of bread wheat; but the bread made from it is of a poor quality. It is largely eaten in the form of Burghul (Kurd.), a kind of local porridge.

"Khorasan Wheat, *T. orientale,* and Polish Wheat, *T. polonicum.* Both these spp. have long hard grains known as Sinn-aj-jamal or Sinn-al-fīl. Sometimes cultivated in the north.

"Dwarf Wheat, *T. compactum* L. Hintah walwal. One or two wild spp. of *Triticum* and of the grass, *Aegilops* (now generally included as a subsp. of this genus), are known to occur in Iraq. Of these the following may be mentioned:

"*T. dicoccoides* Koern. A specimen has been received from Jebel Sinjar, where it is said to grow on the hillside."

In the collections of the Rustam Agricultural Experimental Farm at Hinaidi near Baghdad, Iraq, the following varieties of wheat are represented:

(*a*) *T. vulgare durum libicum.* Black wheat. Rustam No. 41. Field 15A. Origin Euphrates, Iraq.

(*b*) *T. vulgare erytholenca.* Punjab B8. Rustam No. 43. Field 18A. Origin Punjab, India.

(*c*) *T. vulgare albidum.* Linga No. 3. Rustam No. 141. Field 17A. Origin Australia.

(*d*) *T. vulgare leucospermum.* U.S.A. Rustam No. 207. Field 16A. Origin Pusa, India.

(*e*) *T. vulgare turcicum.* Ajibak. Punjab No. 8A. Rustam No. 210. Field 19A. Origin Punjab, India.

(*f*) *T. vulgare albidum.* Clarendon wheat K. Rustam No. 602. Field 14A. Origin Australia.

During excavations at Kish and Jemdet Nasr in Iraq by the Field Museum–Oxford University Joint Expedition, samples of wheat and barley were found in pottery vessels belonging to the period approximately three thousand years before the Christian era. These grains,

preserved through being burnt, are difficult to identify with regard to their species. A summary of this discussion has been published by Henry Field, "Ancient Wheat and Barley from Kish, Mesopotamia," *Amer. Anthr.*, 34, No. 2, pp. 303–309. For further information on this subject the reader is referred to various publications by Nikolai Vavilov, Institute of Plant Industry, Leningrad, U.S.S.R.

Tulipa montana Lindl. (Liliaceae)

فریونه

Fraiyōnah (Iraq); Lāla (Afg.); Govarikh, Wodak (Bal.); bulbs.
Field 54.

The bulbs of this tulip of Iran, Baluchistan, and Afghanistan have brown, coppery skins. They are sold in the Mosul market as food (G.). The bulbs are eaten also in Baluchistan, where the leaves are a fodder for goats.

Uncaria Gambier Roxb. (Rubiaceae)

کات کلابی

Kāt-i-gulābī (Teh.); Chinai-katha (Bom.); extract, pale catechu.
Field 208.

This is a specimen of the pale catechu of commerce obtained from Singapore. In the form of cubes, 1 inch across, it is prepared from the leaves and stalks of the plant grown in the Malay States. It is very astringent, as it contains both catechin and tannin. In Tehran it is prescribed for coughs.

Veratrum album L. (Liliaceae)

کندش

Kundush (Ham., Teh.); Kondochi (Schl.); hellebore root.
Boiss. 5: 171.
Field 221; K.B. 343.

White hellebore is a plant of Europe, Central Asia, and Japan. The root is mentioned as a drug in the herbals of Hippocrates and Galen. The rhizome is dark brown, cylindrical or slightly tapering, 2.5 cm. in diameter, with numerous scars of broken rootlets, whitish within. It contains a poisonous alkaloid, jervine. The root is one of the Irani poisons, and is used only externally, as a paste for headache and facial neuralgia.—It is also applied as a relief from nasal catarrh (H.F.).

Verbascum Thapsus L. (Scrophulariaceae)

مازریون

Māzaryūn (Teh.); Mahi zahraj, Bon tamaku (Ar.); Gidar tamaku (Hind.); great mullein.

W.H.M.M. 150758.

This mullein grows from the temperate Himalayas westward to Britain. The drug consists of broken stalks and thick, hairy leaves. The narcotic action of mullein on fish appears to be well known to the Arabs and Iranis, the meaning of Mahi zahraj being "fish poison." Mohammedan physicians prescribe it in gout and rheumatism in combination with aperients. Throughout Europe mullein has long had a reputation in the pulmonary diseases of cattle, on which account it bears the name of cow's lungwort.

Vetiveria zizanioides Stapf (*Andropogon muricatus* Retz) (Gramineae)

برمکیا

Barmakiyā, Bikh-i-wala (Pers.); Khas Khas (Hind.); Izkhir-i-jami (Ar.); Vetiver (Tam.); root of cuscus grass.

Field 5 (Isf.).

The use of these fragrant, wiry roots for medicinal purposes and in perfumery has been common in India for a long time. The roots emit a pleasant odor when moist, and for this reason they are woven into screens and mats (tatties) which hang over doors and windows to cool and perfume the atmosphere during the hot season. A paste of the root is applied to the skin to relieve oppressive heat of the body, and a cooling aromatic bath is prepared by adding some broken root to the water. The root yields a fragrant essential oil which commands a high price as a perfume (Otto Stapf, *Kew Bulletin*, 1906, 347–349).

Vicia Faba L. (Leguminosae)

باقله

Bāghalā (Iraq); Banklent (Bal.); Bakla (Hind.); Baqilla, Baqlah (Turk.); Paglah (Kurd.); broad or horse bean.

Field 4, 56, 69 (Iraq).

This legume is a native of Iran and is now universally cultivated. The beans are a well-known vegetable and an excellent horse food. The shoots are said to be efficacious in rousing a drunkard from

stupor. The seeds are oblong, 24 by 18 mm. Those of the small variety are oblong, 8 by 5 mm., brown in color, with a white hilum. These seeds are exported from Egypt in large quantities for feeding horses.

Vigna Catjang Walp. (Leguminosae)

لوبيا

Lubia (Iraq); Mak (Bal.); Chowli (Hind.); Barbati (Beng.); cow pea.

Field 58, 93A; 50, 64 (Iraq).

The cow pea is cultivated as an irrigated summer crop and much grown on mud flats along the receding rivers in summer and autumn. The green pods are cooked and eaten as a vegetable and the seeds are eaten as a pulse. The seeds are recognized by their oblong shape, 10 by 7 mm., and white color with a brown or black spot or hilum on one side. The black-eyed variety is known in Italy under the name of Faggiuola del occhio.

Viola sp. (Violaceae)

كل بنفشه

Gul-i-banafshah (Teh.); flowers of violet.

Abu Mansur; Ph. Pers.; Ait.; Boiss. 1: 450; Post 118; Ph. Ind. 1: 141.

Field 8, 76; W.H.M.M. 150710; K.B. 343.

Violet flowers are regarded in Iran and the Punjab as a valuable medicine. The sweet violet (*V. odorata*) is stated to be the origin of the commercial article, but as the flowers are frequently broken and mixed with leaves and stalks, it is not possible to determine the species. The drug is astringent, demulcent, and diaphoretic, and mixed with lime juice and sugar, is administered as an infusion for fever and headache.

—Mixed with *Echium amoenum* Fisch. & Mey., *Nymphaea alba* L., *Cordia myxa* L., *Zizyphus vulgaris* L., as well as lime juice and sugar, *Viola* sp. is given in an infusion for headache, fevers (not malarial), and to soften feces before purgation (H.F.).

Vitis vinifera L. (Vitaceae)

كشمش عناب

Grapes: 'Inab (Iraq); Angur, Drakh (Hind.).

Raisins: Kishmish, Munakha (Pers.); fruit of the vine.

Field 63, Kishmish-askari; 266, Kishmish-i-sabzah; 267, Kishmish-i-dūgh; 99A, 100A, 101A, 102A, 103A, Pasteek.

Grapes, in Sanskrit, Draksha, are noted by Susruta and Charaka; in the dried state they were used in medicine on account of their demulcent, laxative, and cooling properties. The raisins found in India are the sultanas from Kabul and Iran, some of which are very large and pale greenish yellow in color, called Angul Drakh; the black bloom raisins, Kala Drakh, from the same countries, are used for medicinal purposes; and an inferior kind called Munakha is like the pudding raisins sold in England. Pasteek of Baghdad is a confection of raisins and nuts made in Diarbekir and Kurdistan. Soo'juch is another confection of raisins and almonds made in Kurdistan and eaten in winter in place of fresh fruit.

Withania somnifera Dunal (Solanaceae)

بوزیدان

Būzīdān (Teh., Ham.); Asgandh (Hind., Guz.); Sekran (Syr.); Hajarat el dib, "wolf's tree" (Ar.); the root.

Boiss. 4: 287; Fl. Br. Ind. 4: 239; I.H.B.; Post; Ph. Ind. 2: 566; Kew and Pharm. Soc. Museums.

W.H.M.M. 150806; K.B. 343–344.

This is an unarmed shrub with ovate, woolly leaves, inhabiting the south of Europe, Syria, Arabia, India, and Africa. The roots are long, tapering, light brown, with knotty crowns, plump, smooth, white internally, with a short, starchy fracture. The taste is mucilaginous and slightly bitter. From observations on the nature of this plant and the specific names *somnifera* and *hypnotica* given to it by botanists, it might be expected to be harmful to human beings. In Hamadan the root is considered a poison and in parts of Arabia animals refuse to graze on the plant. In Baluchistan, however, it is said to be a vegetable and fodder for goats. Duthie says the shrub is alterative and the root is given to horses. F. B. Power and A. H. Salway (*Proc. Chem. Soc.*, London, 1911) found evidence of an alkaloid and other crystalline principles in the root; but it contained no mydriatic alkaloid, and physiological tests failed to confirm the sedative and hypnotic properties attributed to it.

Zanthoxylum Rhetsa DC. (Rutaceae)

دهن باز دهن بسته

Dahan-bastah, Dahan bastah-bāz (Teh.); Fagara Avicennae.

Field 172; W.H.M.M. 150760.

The fruits of this tree are oval or nearly spherical, of a bright reddish brown color, finely wrinkled, opening when ripe, disclosing a black, shining seed. The Iranis call it Kababah-i-dahan kushadeh, "open-mouthed cubebs," on account of the gaping appearance of the carpels. The taste is at first pleasant like lemon, but afterward pungent, producing much the effect of pyrethrum on the palate. The fruits contain a volatile oil and resins, and are used as a tonic in fever, dyspepsia, and cholera.—They are also given for cystitis in gonorrhea (H.F.).

Zataria multiflora Boiss. (Labiatae)

آب شم

Ab-i-sham, Afsin, Marzanpīsh, Zatar (Teh.); Sa'atar (Ind. bazaars); Izgun, Isghand (Bal.); the herb.

Boiss. 4: 561; Post; I.H.B.; Ph. Ind. 3: 114.

Field 173, 182; W.H.M.M. 150708, 150833; K.B. 344.

This small plant is found in the hills of Muscat in Oman, Iran, and Baluchistan. The species is allied to *Z. bracteata*, which sometimes bears the same vernacular names. Marzanpīsh, the name it has in Tehran bazaars, is also applied to another fragrant labiate (see *Stachys lavandulaefolia*). The small, thick, orbicular, and glandular-dotted leaves have the odor of thymol, and are credited with the carminative properties of thyme and mint.—They are given as an infusion for premature labor pains and rupture (H.F.).

Zizyphora tenuior L. (Labiatae)

کا کوتی

Kākūtī (Teh.); Kahkuti (Bal.); Mishk-i-taramashia (Ind. bazaars); the herb.

Boiss. 4: 587; Ait.; I.H.B.; Ph. Ind. 3: 115.

W.H.M.M. 150865; K.B. 344.

This is a small labiate with spiked flowers found in Iran, Baluchistan, and Afghanistan. Aitchison says it is much used in medicine owing to its strong aroma of peppermint and thyme. In Baluchistan the plant is taken to allay fever, and the seeds, powdered and mixed with buttermilk, are used in cases of dysentery. In Tehran the herb is employed as a cordial and stomachic.

Zizyphus vulgaris L. (Rhamnaceae)

عناب

'Unnāb, Barg-i-unnāb (Teh.); 'Unnāb (Iraq); Ber (Hind.); jujube, fruits and leaves.

Achundow; Boiss. 2: 12; Ph. Ind. 1: 350; Post.

Field 12; 79A; W.H.M.M. 150801; K.B. 344.

The indigenous form of the jujube is a shrub, rarely a tree, in the hills from the Badghis eastward to Kashmir. It is cultivated in all orchards for its fruit, which is eaten by the natives, especially on journeys; this, Aitchison thinks, may account for the spread of the tree throughout Asia along caravan routes. The fruits, which are sweet and wholesome, are the origin of the confection called jujube. They are imported into India, and are used as a demulcent and medicinally from the Persian Gulf to China, where they exist in many varieties and constitute one of the important fruits of the country. The leaves of the jujube tree are eaten with catechu as an astringent, and are made into a poultice to promote the suppuration of boils.

DRUGS OF MINERAL ORIGIN

Alum

زاج سفید

Zāj-u-safīd (Teh.); Sheb (Bagh., Iraq); Spati-kari (Sans.); Zamchi (Turk.); Phitkari, Phataki (Hind.).

Field 250; 126A.

Crystals of alum sulphate, with a styptic, sweetish taste. Alum is used to stop bleeding, to settle turbid water, and in the native tanning industry.—It is also a whitening agent and used as an astringent (H.F.). It is obtained in commercial quantities from Aksu and Kuchar in eastern Turkestan.

Antimonium sulphate

کل سرمه

Kuhl or Surmah (Pers.); Arjan, Surma-ka-pathar (Hind.); black sulphide of antimony, Kermes mineral, kohl.

Field 10 (Isf.), 40A.

Kohl or powdered black antimony is used throughout the East for blackening the eyelids. Introduced originally by the native doctors, hakims, as a remedy for eye diseases, it is now used by women as a cosmetic to improve their appearance. Lampblack is sometimes sold to take the place of the mineral compound.—A detailed summary of the use of kohl in southwestern Asia will form part of a forthcoming publication (H.F.).

Armenian earth

کل ارمنی

Gil-i-armanī (Pers., Hind.); Hajr-el-armeni (Ar.); Armenian bole or earth, ocher.

Field 196, 235; 139A.

Armenian clay consists of oxide of iron mixed with carbonate of lime. Clay of bright red contains a small amount of lime, but lighter-colored clays effervesce strongly with acids and contain less oxide of iron. Armenian bole, either by itself or mixed with red sandalwood and spices, is painted on the face and body to relieve skin affections, boils, and sores. It is one of the earths eaten by pregnant women. In Afghanistan this habit is so frequent that the term "Gil-khwar" is applied to clay or chalk eaters (see Laufer, Berthold, "Geophagy," Field Mus. Nat. Hist., Anthro. Series, 18, No. 2, 1930).

Arsenic trisulphide

زرنیخ

Zarnīkh, Zārnickh-i-dandan (Teh.); Zārnikh-zard (Isf.); Hartal (Hind.); Haritala (Sans.); yellow sulphide of arsenic, orpiment.

Field 230; W.H.M.M. 150825.

Orpiment is obtained from the Hayana Mountains, Iran, and from China. It occurs in massive or lamellar, golden yellow crystalline pieces, sometimes mixed with gray or black metallic portions. It is used as an alterative and nervine tonic.—Mixed with lime it is employed as a depilatory (H.F.).

Calcium sulphate

گچ کاشان

Gach-i-kāshān (Teh.); Guetcha (Schl.); Gil-i-dschar (Achundow, Ph. Pers.); Sanjirahut (Sans.); Sufid pathar (Hind.); gypsum.

Field 215; W.H.M.M. 150893.

Gypsum is a white crystalline mineral, transparent, and slightly soluble in water. Some bazaar specimens are mixed with mineral impurities.

Plaster of Paris is powdered gypsum deprived of its water of crystallization by heat.—To stop epistaxis it is dissolved in water and rubbed on the forehead (H.F.).

Copper oxide

لاسرخ

Lāsurkh (Teh., Isf.); copper oxide, oxidized copper.

Field 151, 427; W.H.M.M. 150822.

Copper oxide is heavy, gray or black metal with crystalline fracture. It is said to be prepared "by placing the metal in a mouse's stomach and burning," and the resulting compound is used directly for ophthalmia. "It is an adhesive application for the eyes to relieve swelling." Lāsurkh is also regarded as a form of kohl, or preparation of antimony, which ladies apply to their eyelids and brows, not only to give them a beautiful black but to smooth away excrescences.

Edible clay

کلی سرشور

Field 228, 251.

Gil-i-sarshūr (Teh., Afg.) is the name given by Aitchison to the edible clay of Afghanistan. The term is applied to a clay of general domestic utility. In Iran it is the name of an earth used by women for cleansing the hair.—The two samples from Tehran were stated to be used as "hair cosmetic" and "complexion cosmetic" (H.F.).

Lead carbonate

Safīd āb-i-shaikh (Teh.); Isfedaj (Ar.); Sufeda (Hind.); carbonate of lead, white lead, painters' whitening.

Field 166.

A soft, white, heavy powder, this is used in making ointment of lead carbonate, which acts as a local sedative and astringent.

Lead oxide

مرداسنگ نقرئی

Murdā sang-i-nugra'i, Murdā sang-i-tilā'ī, Murda sang, "death stone" (Teh.); Sindur (Bom.); litharge.

W.H.M.M. 150704, 150772.

The specimens have a similar appearance; they consist of pieces of fused metal with a grayish brown or pinkish exterior. They are probably samples of the unfinished product of the action of heated air on melted lead, and not proper litharge.

Potassium nitrate

سورة قلم

Shūrah-i-qalam (Teh.); Shorah (Hind.); niter, saltpeter.

Field 231; W.H.M.M. 150854.

Obtained on a large scale from the saltpeter earth of the Punjab and Bihar, crude saltpeter occurs in small, dirty crystals, mixed with much common salt. Shūrah-i-qalam is pure saltpeter in white, crystalline, pen-shaped prisms (qalam=pen).—Niter or saltpeter is prescribed for difficult urination and for gonorrhea (H.F.).

Russian clay

کل داغستان

Gil-i-dāghistān (Isf., Teh.).

Field 9 (Isf.), 227.

This is a grayish white clay, a compound of silica and alumina, in heavy lumps, soapy to the touch and adhesive to the tongue. The clay is brought from Daghestan in the northeastern part of the

Caucasus, and is used with other medicaments and applied to infected parts of the body. It is also taken internally as a tonic in pregnancy, or, as Schlimmer remarks, to satisfy the "appétit des femmes enceintes."

Shāf-i-mamitā (Teh.)

شاف ما میتا

W.H.M.M. 150725.

These are small rolls of a mineral preparation about 2.5 to 3.5 cm. in length, pointed at one end. They consist of chalk, which dissolves in acid, and a quantity of red clay left insoluble. From the name Shāf, meaning suppository or clyster, they are probably used for this purpose.

Sigillated earth

گل مخدوم

Gil-i-makhdūm (Teh.); Tukhm-makhtum (Punj.).

Field 246; 86 (Iraq).

These are two forms of sigillated earth, sealed clay or Lemnian earth. The sample from Tehran is a rounded cake of light reddish clay with white specks, 2 cm. in diameter and 1.5 cm. thick; on the upper portion there is a depression in the center made by a stamp. The clay is smooth to the touch and contains no carbonate of lime. For use in medicine it is moistened with water and applied to purulent wounds.

The samples from Iraq are circular lumps of white clay of a larger size, 3.2 cm. in diameter and 1.2 cm. thick. Each is marked above by three thumb impressions, with checkered lines below. The powdered clay is used as a desiccant for dusting abraded surfaces.

The literature on the Sacred Sealed Earth of Lemnos is very extensive. The earth is described by Dioscorides (A.D. 40) and Galen (A.D. 131–201), and was used in Europe until the 17th century. An interesting account is given in Pomet's "Histoire des Druges" (1694), and perhaps the most recent review of the subject is "Terra Sigillata: a Famous Medicament of Ancient Times," by C. J. S. Thompson (1914). Laufer ("Geophagy," pp. 164–166) gives an account of terra sigillata from Lemnos (cf. **Armenian earth**).

Other medicinal clays represented in the Field collection are: Gil-i-berz (263), a cosmetic used to counteract excessive perspiration;

Gil-i-gazwin (247), a clay eaten by pregnant women; and Gil-i-batuni (258), a siliceous powder used by painters.

The following is a list from other sources of edible and medicinal clays met with in Iran and India.

Gil-i-gubrasi. Cyprus clay.

Gil-i-igritus. Cretan earth.

Gil-i-khurasani. Edible chalk.

Gil-i-misri or *Karkooti.* Egyptian earth or Nile mud taken from bed of river.

Gil-i-shamus. Samian earth (according to Dioscorides the Greeks used the earth of Samos as a means of stopping the vomiting of blood—Laufer, "Geophagy," p. 109).

Gil-i-zard. Yellow clay from Istanbul.

Chunniah (from China, lime). A soap-like, earthy substance obtained from lakes near Halla, eaten by women of Sind.

The subject of eating clays is of ethnological as well as medicinal interest. An attempt to deal with the subject from these points of view will be found in a paper on "Earth-eating and the Earth-eating Habit in India," by D. Hooper and H. H. Mann (*Mem. Asiatic Soc. Bengal,* Calcutta, 1906, pp. 240–270).

Sodium carbonate (crude)

نمک قلیاب

Namak, Qalyāb (Teh.); washing soda.

W.H.M.M. 150843.

This is a white, alkaline salt, either thrown up as an efflorescent deposit on the soil (Sajji mati), or prepared from the ashes of marine plants. It consists of sodium carbonate, containing much chloride and sulphate of sodium, and insoluble matter.

Sulphur

گوگرد زرد

Gūgird-i-zard, Gūgird-i-akhmar (Teh.); Gogut (Yark.); Gandhak (Hind.).

Field 218, 241; W.H.M.M. 150731.

Yellow sulphur in powder and crystalline masses is said to come from the Mount Demavend district in Iran.—Sulphur ointment is used for skin complaints and for secondary syphilis (H.F.).

Nummulites sp. (Foraminifera)

عدس الملک

'Adasu 'l-mulk, Shāhdānej-i-'adasī (Teh.); Sang-i-shadnaj (Afg.); Shudnuj udsee (Ar.); Satanj, Samgh nadh (Punj.).

Field 158; W.H.M.M. 150852.

These are small, lens-shaped or button-shaped fossils, varying from 4 to 12 mm. in diameter. The name Adas refers to the seeds of the lentil, *Lens esculenta*, which the smaller stones resemble. They consist principally of calcium carbonate and act as an antacid. According to Honigberger the hakims administer the powdered fossils for eye diseases and for ulcers. On the authority of the "Doctrine of Signatures" these and other fossils were administered in former days on account of their resemblance to the products of disease.—Powdered with *Punica Granatum* L. and Sumaqh-i-shah, they are applied to painful gums (H.F.).

Corallium rubrum Lam. (Anthozoa)

شاخر مرجان

Shākhah-i-marjān (Teh.); Sang-i-marjan (Hind.); Bussud (Ar.); Prabala (Sans.); red or gem coral.

Field 169; W.H.M.M. 150879.

Coral is obtained from the Red Sea, Persian Gulf, and Arabian coast. It is formed by coral polyps, which have the power of taking up lime from sea water and building this into a skeleton. Coral, therefore, consists principally of calcium carbonate. Both the red coral and the organ-pipe coral (*Tubipora*) are used in medicine; they are reduced to powder and given as a tonic, and to check vomiting and acidity resulting from dyspepsia and biliousness.

Cidaris sp. (Echinoidea)

حجر الیهود

Hajaru'l-yahūd, Sang-i-yahuda (Pers.); Pathar-ka-ber (Hind.); Dugre bore (Bom.); Lapis jadaicus (Ph. Pers.); Jews' stone.

W.H.M.M. 150886.

This fossil echinoid consists of the petrified spines of a sea urchin, found in the Jurassic deposits of the Salt Range, Punjab. Extravagant ideas prevail as to the origin of these fossils, which some suppose

to be petrified fruits; the name they bear in Delhi, Pathar-ka-ber, signifies the fruits or stones of the jujube tree. The stones are oval, pointed at both ends, 3.5 cm. long and 2 cm. in diameter. They contain 95 per cent of calcium carbonate. These stones are sold all over northern India, Iran, Syria, and Palestine. They are said to be useful for healing wounds, and, internally, for flatulence and diarrhea.

Cypraea moneta L. (Gastropoda)

صدف

Sadaf, Wuda (Ar.); Khar mahra (Pers.); Cowri, Sipi (Hind.); cowrie shells.

Field 269A.

These well-known porcelaneous shells from the Mediterranean and Persian Gulf are used throughout the East for making ornaments, and at one time were a means of barter or medium of exchange. They consist chiefly of calcium carbonate, and in medicine are used as an antacid, alterative, and expectorant. The shells also serve as charms against the Evil Eye for babies, horses, and machines (H. F.).

Larinus maculatus Fald. (Coleoptera)

Yielding Tréhala manna; described under the name of the host-plant, *Echinops persicus*.

Bee's wax (Hymenoptera, Apoidea)

موم

Mūm (Teh.); Moma (Hind.); Cera alba; white wax.

Field 216, 260.

White wax is sold in the shops and used for plasters and ointments.

"Camphor candle" (Mūm-i-kāfūri) is a specimen of a crudely made wax candle in the composition of which camphor has been incorporated to diffuse a pleasant odor when burning.

Bombyx fortunatus Hutton (Lepidoptera)

پیله ابریشم

Abrīsham, Pīlāh abrīsham (Teh.); Pileh, cocoon; Resham, silk; Pat (Beng.); Resham-ki-keri (Duk.); cocoons of the silk moth.

W.H.M.M. 150821.

The cocoons of the silk moth or silk worm are said to be styptic and tonic, and are generally administered with other astringents.

Burnt, the ashes are given internally in profuse menstruation and chronic diarrhea.

Under the name of Abrīsham, white silk, cut into small pieces, is given in Ajmere as a remedy for impotence (Irvine).

Otoliths of fish (Percomorphi, Sciaenidae)

Sang-i-sar-i-māhī (from Sang, "a stone"; Sar, "a head"; Mahi, "fish"; an allusion to the belief among the natives that the stone is found in the head of a fish), "poa teeth" (Ind.).

W.H.M.M. 51699.

Otoliths are semi-crystalline bodies composed of carbonate of lime, found in the ear sacs of fish. These concretions are sold in Delhi and other cities in northern India. They resemble in color and form the human incisor teeth, being white and smooth, and having both surfaces convex. The concretions are powdered and given for urinary diseases, chiefly in the suppression and retention of urine (Khory).

Tortoise eggs (*Testudo horsfieldii* Grey and *T. graeca*. Chelonia)

تخم لاک پشت

Tukhm-i-lāk-pusht, "eggs of the hard-backed one" (Teh.); Sur-kūk (Afg.); Lek-poshte (Schl.); tortoise eggs.

W.H.M.M. 150899.

These are globular, orange-colored, waxy bodies, 2 cm. across, disintegrating in water, leaving a yellowish powder, insoluble, with oily globules on the surface. Eggs of the tortoise are used by the Bruhies (Afghanistan) whipped up with water and smeared over the pustules as a remedy to prevent pitting from smallpox (Bellew). In Assam the eggs are also eaten and used medicinally. The eggs and flesh are said to be aphrodisiac. People of the Makran coast (Baluchistan) have a custom of tying a piece of turtle shell to any animal having a stoppage of urine.

Milk curds from *Bos indicus* (Ruminantia)

قر قروت

Qar-i-qurūt (Teh.); Karūt, Krūt (Afg.); dried oxygal, hardened cheese.

Field 238.

Qurūt or Karūt occurs in round balls or cakes of varying shapes made from the milk of cows, buffaloes, or goats. It is usually

obtained by evaporating sour buttermilk, pressing out the whey in bags, by hand, and drying the solid curd in the sun. These cakes are used by Afghans and residents of the black tents of Helmand, who carry them on their tours as a favorite article of diet. When required, the cakes are mixed with water, brinjal fruits and bread added; the whole forms an admirable dish. The Qar-i-qurūt from Tehran is a blackish brown mass, acidulous and salty to the taste, largely soluble in water; it is very similar to meat extracts sold in America and Europe.—The preparation is used as a soup following vermifuge treatment (H.F.).

Kashk Kashk (Kurd.).

Field 61.

These are balls of casein, butter, and salt, prepared from milk. They probably represent the "Pleasant Food" (Khushk horāk) flavored with asafoetida, used in Afghanistan (Aitchison).

Camel's flesh, dried from *Camelus dromedarius* L.; single-humped or Arabian camel

کوهان شتر

Kūhān-i-shutur (Teh.); camel's hump.

Field 140.

The specimen is a piece of yellowish white, dried, fibrous flesh from the hump of a camel. This peculiar drug is directed to be mixed with fat and made into an ointment for piles. The Tatars use the hump cut into slices, which, placed in tea, serve the purpose of butter. Camel's meat is eaten by Greeks and Iranis; the flesh of the young dromedary is considered by Arabs to be equal to veal. Ainslie states that the rennet of the camel, which the Iranis term Punir-mayeh-shutur, is placed among their aphrodisiacs; Honigberger calls the substance Camelinum coagulum and says it is highly esteemed by Arabian doctors.

Bezoar stones from *Capra aegagrus* Gmel.; Persian wild goat

پادزاهر

Pādzahr (Pers.); Fadzehre heyvani (Schl.); Gorochan (Hind.); bezoar stone.

W.H.M.M. 199302.

The bezoar stone appears to have been first used as a medicine by the Arabian physician Avicenna. Razis in his "Continens" describes

it fully, and extols its good qualities as an alexipharmic. Linschoten devotes a chapter to the description of "Bezar stones and other stones good against poyson" and quotes da Orta's account of the origin of this biliary concretion which came from Iran. Similar stones are obtained from the cow, goat, wild boar, antelope, porcupine, and camel. That obtained from the camel is the cheapest, but that from the Persian wild goat is considered the most efficacious. The specimen cited came from Shiraz.

Goats' droppings

مامیز گری

Māmīz, Māmīz-i-kirī (Teh.).

Field 224; W.H.M.M. 150735.

The specimens consist of lumps of fecal matter, from 1 to 1.5 cm. across. Broken and examined with a lens, they were seen to be composed principally of vegetable débris. This is unusual as a drug, and not recorded in ordinary medical works of the East, but in Tehran is said to be rubbed on the chest for bronchitis.

Sheep's stomach, dried

مایه برہ

Māyah-i-barrah (Isf.); sheep's stomach.

Field 8 (Isf.).

This specimen is a dried portion of a sheep's stomach, containing the active principle of the gastric juice. The name Māyah refers to ferment, leaven or rennet, and Panir māyeh, "cheese producer." Rennet for preparing cheese is also obtained in the East from the stomach of hare, dog, or pig, as well as from that of the sheep and calf.

Mummy

میائی

Mūmiyāī, Mūmiyā (Pers.); Silajit (Hind.); Silajatu, "rock sweat" (Sans.); Khatmolt, Mashana churro (Bal.); Asphaltum Persicum; Asphaltum Punjabinum; Osteocolla (Lat.).

This is one of the most ancient medicines of Iran and northern India, and there has been considerable confusion regarding its origin and nature. There is no doubt that it was early associated with dead or embalmed bodies from Egyptian tombs, which were used

in medicine in Europe in the Middle Ages, though often subject to adulteration (Budge, Sir E. A. W., "Mummy: Chapters on Egyptian Funereal Archaeology," London, 1893).

Another animal source has been found in the Khatmolt of Baluchistan, which contained a large proportion of urea. This confirms the direct evidence of a local medical dictionary that "Mummiai is the inspissated urine of the mountain goat."

The third source of Mummy is the exudation of a bituminous substance from a rock; the Indian name Silajit or "rock sweat" expresses the phenomenon. The Mumiai obtained as a secretion from the Mummy mountain of Iran has been described by Chardin, Kämpfer, Ouseley, Le Brun, and other travelers, and these all point to the fact that the substance is a variety of bitumen, asphalt, or allied hydrocarbon. R. Seligmann of Vienna published a pamphlet containing extracts from rare Persian manuscripts regarding this substance. At one time the King of Persia collected the product from one of the mountains near Behbeban and Darab, enclosed it in silver boxes, and distributed it with great care to those in need of this wonderful medicine.

Samples of Mumiai received lately in the Wellcome Historical Medical Museum are those of a variety of asphalt or mineral pitch. Some are black, soft, and sticky, and may be drawn out into long threads, while other samples are black, hard, and brittle.

In the light of modern therapeutics we may anticipate a decline in the reputation of Mumiai of Iran and the Silajit of India, and, like the Hiraceum of the Cape of Good Hope, these once famous remedies will soon be relegated to medicines of a past age.

Cuttle fish bone from *Sepia officinalis* L. (Cephalopoda)

كف دريا

Kaf-i-daryā, "foam of the waters" (Ar.); Samudraphena (Sans.); Os Sepiae, cuttle fish bone.

Field 85A; W.H.M.M. 150837.

Cuttle fish bone is the internal skeleton of the common cuttle or squid; it is used as a polishing material, and reduced to powder is employed in medicine as an antacid. It is often brought by returning pilgrims from Mecca, and hence is looked upon as a very important medicine. The Indian cuttle fish bone has the following composition: calcium carbonate 87.66, calcium sulphate 0.76, organic matter and water 9.3, iron oxide and alumina 0.46, magnesia and alkalis 1.7, silica 0.1, and phosphoric anhydride 0.02, in 100 parts.

SOME PRESCRIPTIONS FROM ISFAHAN, IRAN

Headache

Morning:

'Unnāb	jujube	2 pieces
Gul-i-arvanah	wild violet	2 misqals
Marzanjūsh	white rose	2 misqals
Nabat	crystallized sugar	5 misqals
Tukhm-i-gishnīz	coriander seed	2 misqals

برای دردسر صبحانه

عناب . گل ارزانه . مرزنجوش . نبات . تخم گشنیز

از هریک دو مثقال بگیرید اما از نبات ۵ مثقال باید باشد

Evening:

Nabat	crystallized sugar	5 misqals
Tukhm-i-gishnīz	coriander seed	2 misqals
Usgundūs	germander	2 misqals

Mix the above herbs in each remedy, add some water, and boil. Distil and drink.

عصرانه

نبات . تخم گشنیز . اسقوندوس

از هریک دو مثقال بگیرید اما از نبات ۵ مثقال باید باشد

HEADACHE

Ab-i-gishnīz	coriander water
Maghze hastah-i-ālbālū	sour cherry kernel
Sandal-i-surkh	sandalwood
Sandal-i-zard	aloe
Tiriak	opium

Powder the roots of the above herbs and apply by rubbing over the affected area.

برای درد سر

آب گشنیز . مغز هسته آلبالو . سندل سرخ . تریاک

این دواها را سائیده و بپاشند و بمالند

PLEURISY AND PNEUMONIA

Luabe behdūnah	juice of quince
Mūm-i-kāfūri	camphorated wax
Roghan-i-badam	almond oil

Mix some of each and apply by rubbing on affected parts.

برای ذات الریه و ذات الجنب

لعاب بیدانه . موم کافوری . روغن بادام .

مقداری از هر یک مخلوط کرده و بمالند . این دوای مالیدنی بیشتر

CHEST AND STOMACH PAINS

Morning:

'Unnāb	jujube	5 pieces
Behdūnah	seed of quince	2 misqals
Gul-i-banafshah	flowers of violet	2 misqals
Roghan-i-badam	almond oil	2 misqals
Samgh Arabi	gum arabic	2 misqals
Sebestan	sebestan	5 pieces
Shakar-i-safīd	white sugar	2 misqals
Tāj-i-rīzī	felon wort	2 misqals

برای درد معده وسینه صبحانه

عناب . بهدونه . گل بنفشه . روغن بادام .

صمغ عربی . سپستان . شکر سفید . تاجریزی .

از هریک دو مثقال و از سپستان و عناب ۵ عدد

Evening:

Behdūnah	seed of quince	2 misqals
Maghze tukhm-i-kadū	gourd seed	2 misqals
Roghan-i-badam	almond oil	2 misqals
Shakar-i-safīd	white sugar	2 misqals

Mix, boil, and add half a misqal of almond oil (after distillation) in each of the above two remedies.

عصرانه ایضاً

بهدونه . مغز تخم کدو . روغن بادام از هریک دو مثقال

DYSENTERY

Bārhang	orange	½ misqal
Rīshah-i-khatmī	root of marshmallow flower	2 misqals
Tāj-i-rīzī	felon wort	2 misqals
Shakar-i-safīd	white sugar	2 misqals
Roghan-i-badam	almond oil	2 misqals
Tukhm-i-hummāz	wild sorrel	½ misqal
Kahraba	topaz	2 nukhuds

For bleeding feces; after boiling add almond oil and take internally.

دو سینتاریا

بارهنگ . ریشه ختمی . تاجریزی . شکر سفید . روغن بادام

تخم خماض . کهربا . از هریک ازاین دواها دو مثقال

کهربا دو تخود و بارهنگ و تخم خماض از هریک نیم مثقال

HEMORRHOIDS

Rīshah-i-anjabār*	root of snakeweed

Heat slightly and rub on affected area.

* Root of snakeweed (*Euphorbia pilulifera*), Australian snakeweed or cat's hair; employed in asthma, hay fever, coryza, and other respiratory infections, and also in angina pectoris.

دوا برای بیرون آمدن بواسیل

ریشهٔ انجبار این دوا را می مالند بواسیر خوب .

HEMORRHOIDS

Gul-i-gāv-zabān	oxtongue flower	2 misqals
Tukhm-i-tarrah	leek seed	2 misqals
Gaz-anjabin	manna	7 misqals
Magl ejrig	mixture of aloes, amber, sandalwood, and gum	2 misqals

Mix, boil, and take internally.

دوا برای رفع بیرون آمدن بواسیر خونی

گل گاوزبان . تخم ترہ . گزنگبین . مقل اجوق

از ہریک دو مثقال و ما الزگزنگبین ۷ مثقال باشد

Zarda tukhm-i-murgh	yoke of egg
Kūhān-i-shutur	hump of camel
Maghze galam gao	cow's synovia
Roghan-i-badam	almond oil

Mix the constituents, heat, and apply to entire body.

دوا برای لبتن روی بواسیل

زرده تخم مرغ . کوہان شتر . مغز قلم گاو . روغن بادام .

اینہا را نیم گرم کرده بمالند . بروی بدن می مالند .

HEMORRHOIDS

Aksīr-i-turkī	Asiatic calamus
Tarrah khushk	dried leek

These are burned under the patient's feet.

برای رفع بیرون آمدن بواسیل بادی

اکسیر ترکی . ترهٔ خشک . اینها را زیر پای او آتش میکنند

HEMORRHAGE

Māzū-i-sabz	green gallnut
Zāj-u-safīd	white alum

The gallnut is ground and sprinkled on the wound. The alum is rubbed into the wound.

دوا برای بند آوردن خون

مازوی سبز . زاج سفید . مازو را ساییده روی

زخم میپاشند . زاج را میمالند

NOSEBLEED

Shazenj	blackish, red colored, fragile stone often used medicinally
Kahraba	topaz
Rishah-i-marjan	root of coral
Adas	lentil

Grind well, add some spider web, and apply to nose. Application of ice water on the head, forehead, or the hands is also highly recommended.

دوا برای بند آوردن خون دماغ

شاذنج . کهربا . ریشه مرجان . عدس . اینها را

سائیده با قدری پنبه دتار عنکبوت به دماغ میگذارند

MENSTRUATION

Gul-i-gāv-zabān	oxtongue flower	2 misqals
Maghze hastah-i-ālbālū	sour cherry kernel	2 misqals
Pust-i-pistah	pistachio peel	2 misqals
Nabat	crystallized sugar	2 misqals
Roghan-i-badam	almond oil	2 misqals
Tabāshīr	chalk	2 nukhuds
Pādzahr	bezoar	2 nukhuds

Mix the ingredients, boil until reduced to 5 misqals of sugar, and eat.

دوا برای حیضه

گل گاوزبان . مغز هسته آلبالو . پوست پسته . نبات .

روغن بادام . تباشیر . پازهر . از هریک دو مثقال

و از تواشیر و پازهر ۲ نخود و شکر ۵ مثقال . بجوشانیده

و بخورند

EXCESSIVE BLEEDING DURING MENSTRUATION

Māzū-i-surkhtah	burned oakapple
Khūn-i-siyāvash	dragon's blood
Barg-i-mūrd	leaf of myrtle
Pust-i-anar	peel of pomegranate

Dip a woollen rope into the boiled pomegranate peel; pound the herbs, and into this dip the soaked woolen rope; apply to the clitoris until all the blood has been absorbed.

دوا بجهت زیادی خون حیض

مازوی سوخته . خون سیاوشن . برگ مرد . پوست انار .

اینها را نرم کرده فتیله پشمی را در آب پوست انار که جوش نیده از

گذرانده بعد این فتیله را در آن دوا ها میگذارند . و بخود میگذارند

پس از اینکه این کار را دو سه مرتبه کردند خون آنی بند

می آید .

DELAYED MENSTRUAL PERIOD

Abhil	seed of juniper berries	2 misqals
Rātiyanah	fennel	2 misqals
Zahrah gao	cow's liver	2 misqals
Tukhm-i-mūrd	ant seed	2 misqals

Pound the ingredients, dip a wet, woolen cloth into the mixture and apply internally.

دوا برای کشودن خون حیض

ابهل . راتیانه . زهره گاو . تخم مورد . دواها را نرم کرده . پشم تر را در این دواها گذاشته بخود میگیرند . از هریک دو مثقال باشد

ABORTION

Abhil	seed of juniper berries
Pust-i-mar	snake skin

After the above medicine is placed on the fire, the woman squats over the fumes until the abortion takes place.

بجهت اسقاط جنین

ابهل . پوست مار . اینها را زیر پای مادر آن بچه آتش میکنند .

CONTRACONCEPTION

(*a*) Anghoreh berry

Swallow daily one-half nukhud of the prepared pill.

دوا برای آبستن نشدن

روزی نیم نخود آنغوزه را حب کرده و بخورند

(*b*) Sunbi Ulagh hoof of donkey

Grind it, spread on a cloth, and use as an enema. The foregoing should be used three days after menstruation has begun. Men take no precautions.

برای آبستن نشدن

سنب الاغ خوب میسایند و روی کهنه مالیده و بخود میگذارند

این سنب الاغ را باید بمالند . این دو کار را باید نقطه روز

بعد از اینکه حیض شده بکنند . مالیدن و خوردن را .

CHILDBIRTH

(*a*) Roghan-i-badam — almond oil

Drink 4 misqals of the oil mixed with 2 cups of hot water. This makes delivery very easy.

(*b*) Mishk — musk
Nabat — crystallized sugar

Mix some of each; prepare as tea and drink. The mother must be attended by an intelligent nurse.

دوا برنیکه منجر آه بزاید برای رفع سختی زایش

چهار مثقال روغن بادام با دو فنجان آب گرم باد بدهند

یا اینکه مشک را با نبات دم کرده باد میدهند . نزد زن

قابله دانا و خوب و فهمیی باید باشد

IMPOTENCY

Abrīsham-i-kham	raw silk
Shagagul	wild carrot
Bahman-i-surkhu safīd	white and red bahman
Tudri surkhu safīd	sumac
Jalghūsa	nut resembling pistachio
Maghze funduk	filbert nut
Maghze badam	almond kernel
Narjil	coconut
Maghze pistah	pistachio kernel

Mix the ingredients with honey and eat 2 misqals before intercourse.

دوا برای تقویت باه

ابریشم خام . شقاقل . بهمن سرخ وسفید . تودری سرخ وسفید . جلغوزه . مغز بادام . نارجیل . مغز پسته . عسل را معجون درست کرده دو مثقال قبل از حاجت میخورند

RHEUMATISM

Gul-i-gāv-zabān	oxtongue flower	2 misqals
Būzīdān	fattening drug	2 misqals
Maghze aklil	kernel of garland	2 misqals
Surinjān	wild saffron	2 misqals
Nabat	crystallized sugar	2 misqals

Boil the ingredients and drink.

دوا برای رفع رو ماتیسی

گل گاو زبان . بزر یران . مغز اکلیل . سورنجان .

نبات . از هر یک دو مثقال گرفته بجوش نند و مخورند .

Gudi salib
Surinjān — wild saffron
Hastah-i-ālbālū — pit of sour cherry
Tiriak — opium
Ab-i-gishnīz — coriander water

Mix well and apply externally.

ایضاً

قود صلیب . سورنجان . هسته آلبالو . تریاک . آب کشنیز

با هم مخلوط کرده میمالند .

RHEUMATISM

Roghan-i-bazralbenock	sowing seed oil
Roghan-i-kirdū	walnut oil

Mix well and apply externally.

ایضاً برای روماتیسی

روغن بذرالبنگ . روغن گردو . باهم مخلوط کرده وحی مالند

FRACTURED BONES

Roghan-i-mūm	wax oil
Rūnās	madder
Zarda tukhm-i-murgh	yoke of egg

Mix some of each, warm, and place over the fracture. After the fracture is reduced, apply a piece of wood to keep the limb straight, i.e. a splint.

برای دستخوانهای شکسته

روغن موم . رزده تخم . اینها را نیم گرم کرده

روی شکستگی دستخوان می بندند . روغن موم از همه بهتر است

HAIR RESTORER

Kundur	Juniper gum
Roghan-i-gul-i-surkh	oil of red rose

Mix well and rub into scalp.

دوا برای زنیکه بری سر نمیزند

کندر . روغن گل سرخ . از هریک قدری گرفته مخلوط کرده

می مالند

DEPILATORY

Maghze kala kusfand	sheep's brain
Samgh Arabi	gum arabic
Roghan-i-ziatūn	olive oil

Mix and apply to body. For men and especially for women.

دوا برای زنیکه بری سر اصلاً در نیاید

مغز کله گوسفند . سمق عربی . روغن زیتون . هریک قدری

گرفته مخلوط کرده میمالند .

SNAKEBITE

No true remedy.

Make a deep incision with a knife and place a piece of burning charcoal in the open wound.

برای مار گزیده

دوای برای این که مخصوص باشد معلوم نیست

ALPHABETICAL LIST OF NATIVE NAMES WITH LATIN EQUIVALENTS

Aabb-el-harar (Teh.).....*Juniperus excelsa* Bieb.
Abhil (Teh.).....*Juniperus excelsa* Bieb.
Abir (Pers.).....*Crocus sativus* L.
Ab-i-sham (Teh.).....*Zataria multiflora* Boiss.
Abrīsham (Teh.).....*Bombyx fortunatus* Hutton
Abu Suwaif (Ar.).....*Hordeum* sp.
Acoron (Gr.).....*Acorus Calamus* L.
Adas (Turk.).....*Lens esculenta* Moench (also p. 194)
'Adas-i-talkh (Teh.).....*Indigofera Roxburghii* Jaume
Adas mar (Bagh.).....*Lens esculenta* Moench
'Adasu 'l-mulk (Teh.).....*Nummulites* sp.
Adhafir-aj-jian (Iraq).....*Astragalus hamosus* L.
Adhafir-ash-shaitan (Iraq).....*Astragalus hamosus* L.
Affaz (Teh.).....*Quercus infectoria* Olivier
Afsant-el-bahara (Ar.).....*Artemisia maritima* L.
Afsantīn (Teh.).....*Artemisia vulgaris* L.
Afsantīn-i-hindi (Ar.).....*Artemisia vulgaris* L.
Afs-el-batum (Tri.).....*Pistacia Khinjuk* Stocks
Afsin (Teh.).....*Zataria multiflora* Boiss.
Aftāb gardan (Teh.).....*Helianthus annuus* L.
Aftīmūn.....*Cuscuta planifolia* Ten. and *C. hyalina* Roth
Afyun (Iraq).....*Papaver somniferum* L.
Agalactie (Schl.).....*Lecanora esculenta* Eversm.
Agirgarhā (Teh., Isf.).....*Anacyclus Pyrethrum* DC.
Ajees-aafs (Ar.).....*Quercus infectoria* Olivier
'Ajībah (Punj.).....*Triticum vulgare* Vill.
Ajibak.....*Triticum* sp.
Ajīl-i-turkī (Teh.).....*Acorus Calamus* L.
Ajmud (Hind.).....*Apium graveolens* L.
Ajowan (Hind.).....*Carum copticum* Benth. & Hook.
Ajwain (Hind.).....*Carum copticum* Benth. & Hook.
Ajwain-ka-phul (Ind.).....See *Carum copticum* Benth. & Hook.
Akalkara (Hind.).....*Anacyclus Pyrethrum* DC.
Akar (Bal.).....*Sesbania aculeata* Poir.
Aketi (Ham.).....*Astragalus hamosus* L.
Akhrot (Hind.).....*Juglans regia* L.
Aksīr-i-turkī (Teh.).....*Acorus Calamus* L.
Akulla (Ar.).....*Commiphora opobalsamum* Kunth
Alaf-khareg (Afg.).....*Crataegus orientalis* Bieb.
Alashi (Ind.).....*Linum usitatissimum* L.
Alfabaca (Port.).....*Ocimum Basilicum* L.
Al-kanna (Ar.).....See *Onosma echioides* L.
Alkikenji (Ar.).....*Physalis Alkekengi* L.
Alsi (Ind.).....*Linum usitatissimum* L.
Alū (Teh.).....*Prunus institia* L. var. *bokharensis*
Alū-bokhara (Teh.).....*Prunus institia* L. var. *bokharensis*
Alucha (Hind.).....*Prunus domestica* L. var. *Juliana*
Alūchah (Teh.).....*Prunus domestica* L. var. *Juliana*
Ambari (Duk.).....*Hibiscus cannabinus* L.
Amlaj (Ar.).....*Phyllanthus Emblica* L.
Amla morabba (Turk.).....*Phyllanthus Emblica* L.

Ammeos (Ph. Pers.).....*Carum copticum* Benth. & Hook.
Amulah-i-suftah (Teh.).....*Phyllanthus Emblica* L.
Amulah-mugashshar (Isf.).....*Phyllanthus Emblica* L.
Andiz otu (Turk.).....*Inula Helenium* L.
Anduz (Ham.).....*Inula Helenium* L.
Anghinar (Turk.).....*Cynara Scolymus* L.
Angul Drakh (Ind.).....*Vitis vinifera* L.
Angūm (Teh.).....*Acacia Senegal* Willd.
Angur (Hind.).....*Vitis vinifera* L.
Angur-i-kauli or kawali
(Iraq, Pers.).....*Loranthus Grewinkii* Boiss. & Bunge
Anīla-ghnaka (Sans.).....*Terminalia bellerica* Roxb.
Anīsūn (Teh.).....*Pimpinella Anisum* L.
Anitum (Yunani).....*Peucedanum graveolens* Benth. & Hook.
Anjabar-i-rumi (Pers.).....*Polygonum Bistorta* L.
Anjar (Iraq).....*Prunus domestica* L. var. *Juliana*
Année (Fr.).....*Inula Helenium* L.
Antchibun (Tab.).....*Pimpinella Anisum* L.
Anzarut (Ar.).....*Astragalus fasciculaefolius* Boiss.
Aola amla (Hind.).....*Phyllanthus Emblica* L.
Arab qosi (Turk.).....*Glossostemon Bruguieri* Desf.
Arak-badiani (Schl.).....*Pimpinella Anisum* L.
Arak Hail (Bagh.).....*Elettaria Cardamomum* Maton.
Arakta chandana (Sans.).....*Pterocarpus santalinus* L.
Ardi-shauki (Ar.).....*Cynara Scolymus* L.
Arjan (Hind.).....*Antimonium Sulphidum*
Arpā (Turk.).....*Hordeum* sp.
Arwah-i-kunjad (Pers.).....*Sesamum indicum* L.
Arzan (Pers.).....*Panicum miliaceum* L.
Asal-alsus.....*Glycyrrhiza glabra* L.
Asalia (Bom.).....*Lepidium sativum* L.
Asārūn (Teh.).....*Asarum europaeum* L.
Asbaghul (Pers.).....*Plantago ovata* Forsk.
Asbarg (Iran).....*Delphinium Zalil* Ait. & Hemsl.
Aschna (Ar.).....See *Roccella Montagnei* Bél.
Asfar-i-makkī (Teh.).....*Cymbopogon Schoenanthus* Spreng.
Asgandh (Hind., Guz.).....*Withania somnifera* Dunal
Asil-a-krasb (Afg.).....*Apium graveolens* L.
Aspand (Kurd.).....*Peganum Harmala* L.
Asphaltum Persicum.....Mummy
Asphaltum Punjabinum.....Mummy
Aspust (Bal.).....*Medicago sativa* L.
Aswarg (Iran).....*Delphinium Zalil* Ait. & Hemsl.
Atasi (Ind.).....*Linum usitatissimum* L.
Atractus (Gr.).....*Carthamus tinctorius* L.
Avartin (Sans.).....*Helicteres Isora* L.
Azaraki (Ind.).....*Strychnos Nux Vomica* L.
Azkar (Teh.).....*Cymbopogon Schoenanthus* Spreng.

Baberang (Hind.).....*Embelia Ribes* Burm.
Bābūna.....*Anthemis Wiedemanniana* Fisch. & Mey.
Bābūnah (Teh.).....*Matricaria Chamomilla* L.
Babunaj.....*Anthemis Wiedemanniana* Fisch. & Mey.
Babunaj (Pers.).....*Matricaria Chamomilla* L.
Bach (Punj.).....*Acorus Calamus* L.
Bādām-i-talkh (Teh.).....*Prunus Amygdalus* Stokes var. *amara* Baill.

Badian (Pers.).....See *Foeniculum vulgare* Mill.
Badian (Ar.).....See *Pimpinella Anisum* L.
Badian-i-rumi (Teh.).....*Pimpinella Anisum* L.
Bād-i-ranjah būyah (Teh.).....*Dracocephalum Moldavica* L.
Bād-i-ranjah-būyah (Teh.).....*Asperugo procumbens* L.
Bādiyān-i-khatā'i (Pers.).....*Illicium verum* Hook. f.
Badiyān-i-sabz (Teh., Ham.).....*Foeniculum vulgare* Mill.
Badrandj-boia.....See *Asperugo procumbens* L.
Badrendj-bou-yih (Schl.).....*Dracocephalum Moldavica* L.
Badrish-bu (Tab.).....*Dracocephalum Moldavica* L.
Badroudge ibieze (Schl.).....*Ocimum canum* Sims
Badyan (Afg.).....*Foeniculum vulgare* Mill.
Bāghalā (Iraq).....*Vicia Faba* L.
Bahār-i-nāranj (Teh.).....*Citrus sinensis* (L.) Osbeck
Bahman-i-pīch (Teh.).....*Helicteres Isora* L.
Baibun (Mosul).....*Matricaria Chamomilla* L.
Bajindak (Afg., Hind.).....*Lepidium Draba* L.
Bakayan (Hind.).....*Melia Azedarach* L.
Bakla (Hind.).....*Vicia Faba* L.
Balādur (Teh., Isf.).....*Semecarpus Anacardium* L.
Balasan (Ar.).....*Commiphora opobalsamum* Kunth
Balchar (Afg.).....*Nardostachys Jatamansi* DC.
Balera (Hind.).....*Terminalia bellerica* Roxb.
Balīlah (Teh., Isf.).....*Terminalia bellerica* Roxb.
Bālingū (Ham.).....*Lallemantia Royleana* Benth.
Bālingū shahrī (Teh.).....*Lallemantia ibirica* F. & M.
Bālingū-shīrāzī (Teh.).....*Lallemantia Royleana* Benth.
Balūt (Teh.).....*Quercus persica* Jaub. & Spach
Bango (Port.).....*Hyoscyamus reticulatus* L.
Banj barri (Iraq).....*Hyoscyamus reticulatus* L.
Banklent (Bal.).....*Vicia Faba* L.
Banoi.....*Anthemis Wiedemanniana* Fisch. & Mey
Bans lochan (Hind.).....*Bambusa arundinacea* L.
Baphalli (Hind.).....*Corchorus olitorius* L.
Baqilla (Turk.).....*Vicia Faba* L.
Baqlah (Turk.).....*Vicia Faba* L.
Barambi (Hind.).....*Taxus baccata* L.
Barbati (Beng.).....*Vigna Catjang* Walp.
Bardane (Teh.).....*Arctium Lappa* L.
Barg-i-gāv-zabān (Teh.).....*Echium sericeum* Vahl
Barg-i-hind īrān (Teh.).....*Butea frondosa* Roxb.
Barg-i-livās (Isf.).....*Rheum Ribes* L.
Barg-i-mūrd (Teh.).....*Myrtus communis* L.
Barg-i-nāranj (Isf.).....*Citrus sinensis* (L.) Osbeck
Barg-i-quitarān (Teh.).....*Chrozophora verbascifolia* Juss.
Barg-i-sādhaj (Teh.).....*Cinnamomum Cassia* Blume
Barg-i-unnāb (Teh.).....*Zizyphus vulgaris* L.
Barg tiol (Teh.).....*Tilia rubra* DC.
Bārhang (Teh.).....*Plantago major* L.
Barhi.....*Phoenix dactylifera* L.
Bārījah (Teh.).....*Ferula galbaniflua* Boiss.
Bar-i-tang (Bal.).....*Plantago major* L.
Bariz (Teh.).....*Ferula galbaniflua* Boiss.
Barmakiyā (Pers.).....*Vetiveria zizanioides* Stapf
Bār ranjūbah (Teh.).....*Asperugo procumbens* L.

Barsim (Iraq)..... *Trifolium alexandrinum* L.
Baryadh dari (Turk.)..... *Sorghum vulgare* Pers.
Basal (Ar.)..... *Allium Cepa* L.
Basarak Katrin (Pers.)..... *Linum usitatissimum* L.
Basfaij (Ind. bazaars)..... *Polypodium vulgare* L.
Bas-fāyij (Teh.)..... *Polypodium vulgare* L.
Basilikon Kuminon (Gr.)..... *Carum copticum* Benth. & Hook.
Bazbaz (Pers.)..... *Myristica fragrans* Houtt.
Baz-i-tamar-hindi (Ar.)..... *Tamarindus indica* L.
Bazrak (Ham.)..... *Linum usitatissimum* L.
Bazr-el-fujl (Ar.)..... *Raphanus sativus* L.
Bazr-i-banj (Teh., Ham.)..... *Hyoscyamus reticulatus* L.
Bazr ul Kattan (Achundow)..... *Linum usitatissimum* L.
Bazrul khasa (Ar.)..... *Lactuca sativa* L.
Bdellium (Hind.)..... *Commiphora Mukul* Engl.
Bedanjir..... *Ricinus communis* L.
Bekh (Ait.)..... *Gypsophila paniculata* L.
Bekh-i-sumbul (Pers.)..... *Nardostachys Jatamansi* DC.
Bekh-sus..... *Glycyrrhiza glabra* L.
Benj (Ar.)..... *Hyoscyamus reticulatus* L.
Ber (Hind.)..... *Zizyphus vulgaris* L.
Berengue Kaboli (Schl.)..... *Embelia Ribes* Burm.
Berij sadri Gilan (Teh.)..... *Oryza sativa* L.
Bernooty (Iraq)..... See *Nicotiana Tabacum* L. and *N. rustica* L.
Bhela (Hind.)..... *Semecarpus Anacardium* L.
Bhilava (Hind.)..... *Semecarpus Anacardium* L.
Bibi (Bal.)..... *Pyrus Cydonia* L.
Bid-anjubin (Afg.)..... *Salix fragilis* L.
Bide Knecht (Achundow)..... *Salix fragilis* L.
Bidend jireh khatai..... *Croton Tiglium* L.
Bīd-khisht (Teh.)..... *Salix fragilis* L.
Bihidana (Pers.)..... *Pyrus Cydonia* L.
Bikh-anjubaz (Punj.)..... *Polygonum Bistorta* L.
Bikh-i-banafshah (Teh.)..... *Iris spuria* Pall.
Bīkh-i-halīmun (Teh.)..... *Asparagus officinalis* L.
Bīkh-i-shankarān (Isf.)..... *Conium maculatum* L.
Bikh-i-wala (Pers.)..... *Vetiveria zizanioides* Stapf
Bin-i-talkh (Isf.)..... *Indigofera Roxburghii* Jaume
Biranj mishk..... *Calamintha graveolens* Benth.
Birinjasaf (Ind. bazaars)..... *Achillea Santolina* L.
Birinj-i-kābulī (Teh., Isf.)..... *Embelia Ribes* Burm.
Birinj-i-sadri (Teh.)..... *Oryza sativa* L.
Bizousha dishi and erkek (Turk.)... *Plantago major* L.
Bizr dinbil (Iraq)..... *Plantago major* L.
Bizre Kattane (Schl.)..... *Linum usitatissimum* L.
Bol (Hind., Bom.)..... *Commiphora Molmol* Engl.
Bol shiah (Hind.)..... *Aloe Perryi* Baker
Bonduk-i-hindi (Ar.)..... *Caesalpinia Bonducella* Roxb.
Bon tamaku (Ar.)..... *Verbascum Thapsus* L.
Bughdāi (Turk.)..... *Triticum* sp.
Bui madaran (Punj.)..... *Achillea Santolina* L.
Bundaq (Iraq)..... *Corylus Colurna* L.
Būqnāq (Teh.)..... *Glossostemon Bruguieri* Desf.
Burghul (Kurd.)..... *Triticum durum* Desf. (p 182)
Buski (Bal.)..... *Lepidium Draba* L.

Bussud (Ar.)..... *Corallium rubrum* Lam.
Butīnak (Teh.)..... *Saussurea Lappa* C. B. Clarke
Buzghanj (Ham., Isf.)..... *Pistacia Khinjuk* Stocks
Būzīdān (Ham., Teh.)..... *Withania somnifera* Dunal
Buzz-ul-karaphs (Ar.)..... *Apium graveolens* L.

C'a (N. Chin.)..... *Thea sinensis* L.
Cai (Russian)..... *Thea sinensis* L.
Camphire (Syr.)..... *Lawsonia alba* Lam.
Chā (Hind.)..... *Thea sinensis* L.
Chab roman (Bagh.)..... *Punica Granatum* L.
Chagzī (Iraq)..... *Juglans regia* L.
Chahār tankhūsh (Teh.)..... *Pistacia integerrima* Stew.
Chahār-tukhmah (i.e. four seeds)... *Plantago major, Alyssum campestre, Cordia Myxa, Pyrus Cydonia* (p. 98)
Chā'ī sabz (Teh.)..... *Thea sinensis* L.
Chakha-khoul (Turk.)..... *Trachydium Lehmanni* Benth.
Chaltuk (Kurd.)..... *Oryza sativa* L.
Chana (Hind.)..... *Cicer arietinum* L.
Charmaghy (Pers.)..... *Juglans regia* L.
Chasm (Ham., Teh.)..... *Cassia Absus* L.
Chasm-i-khurūs (Pers.)..... *Abrus precatorius* L.
Chatlanguch (Ham.)..... *Pistacia integerrima* Stew.
Chighaghole metri (Schl.)..... *Trachydium Lehmanni* Benth.
Chīna (Hind., Sans.)..... *Panicum miliaceum* L.
Chinai-katha (Bom.)..... *Uncaria Gambier* Roxb.
Chini (Chin.)..... See *Saccharum officinarum* L.
Chiresh..... *Eremurus Aucherianus* Boiss.
Chir zadi (Schl.)..... *Lecanora esculenta* Eversm.
Chitra (Bom.)..... *Plumbago rosea* L.
Chitrak (Hind.)..... *Plumbago rosea* L.
Chitraka (Sans.)..... *Plumbago rosea* L.
Chob-i-kut (Afg.)..... *Saussurea Lappa* C. B. Clarke
Chota gokhru (Hind.)..... *Tribulus terrestris* L.
Chowli (Hind.)..... *Vigna Catjang* Walp.
Chūb Chīnī (Ind. bazaars)..... *Smilax China* L. and *S. glabra* Roxb.
Chughak..... *Prosopis Stephaniana* Kunth
Chuk-andar (Hind.)..... *Beta vulgaris* L.
Chukundar (Turk.)..... *Beta vulgaris* L.
Chuli (Botes)..... *Prunus Armeniaca* L.
Chunniah..... Sigillated Earth
Costum amarum (Ph. Pers.)..... *Saussurea Lappa* C. B. Clarke
Cowri (Hind.)..... *Cypraea moneta* L.
Cummun (Syr.)..... *Cuminum Cyminum* L.
Cuscuta (Lat.)..... *Cuscuta planifolia* Ten. and *C. hyalina* Roth

Dahan-bastah (Teh.)..... *Zanthoxylum Rhetsa* DC.
Dahan bastah-bāz (Teh.)..... *Zanthoxylum Rhetsa* DC.
Dairi..... *Phoenix dactylifera* L.
Dalik (Ar.)..... *Rosa hemisphaerica* Herm.
Dall (Ind. bazaars)..... *Lens esculenta* Moench
Damaverah (Ham.)..... *Rosa hemisphaerica* Herm.
Dam-el-akhwain (Ar.)..... *Dracaena Cinnabari* Balf.
Dam-i-ālbālū (Teh.)..... *Prunus Cerasus* L.
Daramanah (Teh.)..... *Artemisia maritima* L.
Dārasīni (Ar.)..... *Cinnamomum Cassia* Blume

Dār-chīnī (Isf.).....*Cinnamomum Cassia* Blume
Dari (Hind.).....*Sorghum vulgare* Pers.
Darūnaj-i-akrabī (Teh., Ham.).....*Doronicum Pardalianches* L.
Darvunedge eghrebi (Schl.).....*Doronicum Pardalianches* L.
Datura (Hind.).....*Datura Stramonium* L.
Davālah (Ham.).....*Roccella Montagnei* Bél.
Dawalak (Achundow).....See *Roccella Montagnei* Bél.
Dhanya (Hind.).....*Coriandrum sativum* L.
Dhupa.....*Boswellia Carterii* Bird.
Dhurah (Ar.).....*Sorghum vulgare* Pers.
Dibk (Ar.).....*Loranthus Grewinkii* Boiss. & Bunge
Digal.....*Phoenix dactylifera* L.
Digh-dighane (Isf.).....*Celtis australis* L.
Djūshā (Pers.).....*Thymus Serpyllum* L.
Doronic (Gr.).....*Doronicum Pardalianches* L.
Doronicum Graeci (Ph. Pers.).....*Doronicum Pardalianches* L.
Drakh (Hind.).....*Vitis vinifera* L.
Draksha (Sans.).....*Vitis vinifera* L.
Dudhi (Ind. bazaars).....See *Citrullus vulgaris* Schrad.
Dugre bore (Bom.).....*Cidaris* sp.
Dukhn (Iraq).....*Panicum miliaceum* L.
Dulm-ul-hasak.....See *Tribulus terrestris* L.
Dža (Chin.).....*Thea sinensis* L.

Ela (Sans.).....*Amomum subulatum* Roxb.
El-sābūniyeh (Ar.).....*Gypsophila paniculata* L.
Enula Campana (Med. Lat.).....*Inula Helenium* L.
Epitymon (Gr.).....See *Cuscuta planifolia* Ten. & *C. hyalina* Roth
Erok Chatma (Achundow).....*Althaea ficifolia* Cav.
Erok Chatma (Bagh.).....*Althaea rosea* L. (p. 83)
Erok Hail (Bagh.).....*Elettaria Cardamomum* Maton.
Erok orab kuzzi (Iraq).....*Glossostemon Bruguieri* Desf.
Erva dos (Dymock).....*Pimpinella Anisum* L.

Fadzehre heyvani (Schl.).....*Capra aegagrus* Gmel.
Faranj mishk.....*Calamintha graveolens* Benth.
Fāsūliyah (Iraq).....*Phaseolus vulgaris* L.
Filfil ahmer (Ar.).....*Capsicum frutescens* L.
Filfil-i-surkh (Teh.).....*Capsicum frutescens* L.
Filfil mūyeh (Teh.).....*Capsicum frutescens* L.
Findak (Hind.).....*Corylus Colurna* L.
Findaq (Iraq).....*Corylus Colurna* L.
Flores Punicae granati (Ph. Pers.)..*Punica Granatum* L.
Folusi (Yark.).....*Cassia Fistula* L.
Foveh (?) (Ham.).....*Cirsium lanceolatum* L.
Fraiyōnah (Iraq).....*Tulipa montana* Lindl.
Fudanaj (Ar.).....*Mentha sylvestris* L.
Fūfal (Teh., Ar.).....*Areca Catechu* L.
Fulūs (Isf.).....*Cassia Fistula* L.
Fuluz mahi (Pers.).....*Strychnos Nux-vomica* L.
Funduk (Teh.).....*Corylus Colurna* L.
Fūtfūteh (Teh.).....*Adansonia digitata* Juss.
Fuwwah (Ar.).....*Rubia Cordifolia* L. and *R. tinctorium* L.

Gach-i-kāshān (Teh.).....Calcium Sulphate
Gaiwuzh (Turk.).....*Crataegus orientalis* Bieb.

Gaizar (Iraq)..... *Daucus Carota* L.
Gajur (Hind.)..... *Daucus Carota* L.
Gandhak (Hind.)..... Sulphur
Gandum-ābī (Teh.)..... *Triticum vulgare* Vill.
Gandum-i-safīd (Teh.)..... *Triticum vulgare* Vill.
Ganim (Kurd.)..... *Triticum* sp.
Gaoshira (Teh.)..... *Ferula galbaniflua* Boiss.
Garabi (Hind.)..... *Entada gigas* (L.) Fawc. & Rendle
Gara tsochorek oti (Tab.)..... *Nigella arvensis* L. (p. 144)
Gara za'rak (Tab.)..... *Lallemantia ibirica* F. & M.
Garchak farangī (Teh.)..... *Ricinus communis* L.
Gashnish (Turk.)..... *Coriandrum sativum* L.
Gaz-alafi (Teh.)..... *Tamarix gallica* L. var. *mannifera* Ehrenb.
Gaz-anjabin (Teh.)..... *Tamarix gallica* L. var. *mannifera* Ehrenb. (also p. 162)
Gaz-i-khūnsār (Teh.)..... *Tamarix gallica* L. var. *mannifera* Ehrenb.
Gaz-i-shakar..... *Tamarix gallica* L. var. *mannifera* Ehrenb.
Gehun (Hind.)..... *Triticum vulgare* Vill.
Gentar..... *Phoenix dactylifera* L.
Gharekum (Hind., Bom.)..... *Polyporus officinalis* Fries
Ghārīgūn (Teh.)..... *Polyporus officinalis* Fries
Gharikun (Ind. bazaars)..... *Polyporus officinalis* Fries
Gharīqun (Gr.)..... See *Agaric*
Ghartsche (Schl.)..... *Agaric*
Ghaza gouzanah (Teh.)..... *Inula Helenium* L.
Ghich (Ham.)..... *Crataegus orientalis* Bieb.
Ghodaoumche chirazi (Schl.)..... *Alyssum campestre* L.
Ghya ke bij (Hind.)..... *Lagenaria vulgaris* Ser.
Giafari (Schl.)..... *Heracleum persicum* Desf.
Giash mashi (Ham.)..... *Quercus* sp.
Gidar tamaku (Hind.)..... *Verbascum Thapsus* L.
Gila (Beng.)..... *Entada gigas* (L.) Fawc. & Rendle
Gil-i-armanī (Pers., Hind.)..... Armenian Earth
Gil-i-batuni..... Sigillated Earth
Gil-i-berz..... Sigillated Earth
Gil-i-dāghistān (Isf., Teh.)..... Russian Clay
Gil-i-dschar (Achundow, Ph. Pers.).. Calcium Sulphate
Gil-i-gazwin..... Sigillated Earth
Gil-i-gubrasi..... Cyprus Clay, Sigillated Earth
Gil-i-igritus..... Cretan Earth, Sigillated Earth
Gil-i-khurasani..... Edible Chalk, Sigillated Earth
Gil-i-makhdūm (Teh.)..... Sigillated Earth
Gil-i-misri..... Egyptian Earth, Sigillated Earth
Gil-i-sarshūr (Teh., Afg.)..... Edible Clay
Gil-i-shamus..... Samian Earth, Sigillated Earth
Gil-i-zard..... Yellow Clay, Sigillated Earth
Gil-khwar (Laufer)..... See Armenian Earth
Gingelly (Hind.)..... *Sesamum indicum* L.
Girdū (Teh.)..... *Juglans regia* L.
Gizar Gia (Kurd.)..... *Hordeum* sp.
Glans Quercus Ballotae (Ph. Pers.).. *Quercus persica* Jaub. & Spach
Godumai (Tam.)..... *Triticum vulgare* Vill.
Gogut (Yark.)..... Sulphur
Goi-zira (Tab.)..... *Cuminum Cyminum* L.
Gole himmicheh behar (Schl.)..... *Calendula officinalis* L.

Goleper (Kerm.).....*Heracleum persicum* Desf.
Gole zarde (Schl.).....*Rosa foetida* Herm.
Gol tighol (Royle).....*Echinops persicus* Stev.
Goondina (Pers.).....*Allium Cepa* L.
Gora vach (Hind.).....*Acorus Calamus* L.
Gorochan (Hind.).....*Capra aegagrus* Gmel.
Goulpere (Boiss.).....See *Heracleum persicum* Desf.
Govarikh (Bal.).....*Tulipa montana* Lindl.
Goz (Turk.).....*Juglans regia* L.
Gozharik (Kurd.).....*Citrullus Colocynthis* Schrad.
Granati Cortex (Ph. Pers.).....*Punica Granatum* L.
Guda (Hind.).....See *Saccharum officinarum* L.
Gudāmah (Teh.).....*Alyssum campestre* L.
Gudāmah-i-shahrī (Teh.).....*Alyssum campestre* L.
Gudāmah-i-shērazi (Teh.).....*Alyssum campestre* L.
Guetcha (Schl.).....Calcium Sulphate
Gueza-elefi (Schl.).....*Quercus* sp. (p. 162)
Gueze elefi (Teh.).....*Quercus Vallonea* Kotschy
Guezmazedj (Teh.).....*Tamarix pentandra* Pall.
Gugal (Hind.).....*Commiphora Mukul* Engl.
Gūgird-i-akhmar (Teh.).....Sulphur
Gūgird-i-zard (Teh.).....Sulphur
Guize khouncar (Schl.).....*Tamarix pentandra* Pall.
Gujar (Bom.).....*Astragalus fasciculaefolius* Boiss.
Gul gaindo (Bal.).....*Tagetes erecta* L.
Gul-i-abbasa (Pers.).....*Mirabilis Jalapa* L.
Gul-i-anār (Teh.).....*Punica Granatum* L.
Gul-i-arbore(?) (Teh.).....*Salvia Hydrangea* DC.
Gul-i-bābūna (Ham.).....*Anthemis Wiedemanniana* F. & M.
Gul-i-banafshah (Teh.).....*Viola* sp.
Gul-i-būmādarān.....*Achillea Santolina* L.
Gul-i-chaman (Teh.).....*Lolium rigidum* Gaud.
Gul-i-gāv-zabān (Teh.).....*Echium amoenum* Fisch. & Mey. and other spp.
Gul-i-geshuz (Ham.).....*Cuscuta planifolia* Ten. and *C. hyalina* Roth
Gul-i-halvā (Isf.).....*Celosia argentea* L.
Gul-i-hamaz (Dymock).....*Rumex vesicarius* L. (p. 167)
Gul-i-ja'farī (Teh.).....*Tagetes erecta* L.
Gul-i-jauz.....*Myristica fragrans* Houtt.
Gul-i-kadū (Teh., Ham.).....*Cucurbita Pepo* DC.
Gul-i-kajira (Ar.).....*Carthamus tinctorius* L.
Gul-i-kākanj.....*Physalis Alkekengi* L.
Gul-i-keshus (Pers.).....*Cuscuta planifolia* Ten. and *C. hyalina* Roth
Gul-i-khatmī.....*Althaea lavateraefolia* DC.
Gul-i-khatmī (Teh.).....*Althaea* sp.
Gul-i-khatmi (Ait.).....*Malva sylvestris* L. var. *mauritiana* Boiss.
Gul-i-livās (Ham., Teh.).....*Rheum Ribes* L.
Gul-i-nīlūfar (Teh.).....*Nymphaea alba* L.
Gul-i-panīrak (Teh.).....*Malva sylvestris* L. var. *mauritiana* Boiss.
Gul-i-parr (Isf.).....*Heracleum persicum* Desf.
Gul-i-pisteh (Bom.).....*Pistacia Khinjuk* Stocks.
Gul-i-pūnah (Isf.).....*Mentha sylvestris* L.
Gul-i-pūnah (Teh.).....*Hyssopus officinalis* L. var. *angustifolia* Boiss.
Gul-i-raman-zeba (Ait.).....*Rosa foetida* Herm.
Gul-i-rang (Teh.).....*Carthamus tinctorius* L.
Gul-i-sarnigūn (Teh.).....*Fritillaria imperialis* L.

Gul-i-sarv (Teh.).....*Cupressus sempervirens* L.
Gul-i-serwaj (Pers.).....*Hymenocrater elegans* Br. (p. 168)
Gul-i-shirper (Pers.).....*Fritillaria imperialis* L.
Gul-i-sipar (Teh.).....*Heracleum persicum* Desf.
Gul-i-surkh (Teh.).....*Rosa damascena* Mill.
Gul-i-zard (Teh.).....*Rosa foetida* Herm.
Gul-jaferi (Hind.).....*Tagetes erecta* L.
Gulkhand.....See *Rosa damascena* Mill.
Gul nare-farci (Schl.).....*Punica Granatum* L.
Gulnār-i-farsī (Teh.).....*Punica Granatum* L.
Gur (Leh).....See *Saccharum officinarum* L.
Gurfah (Teh.).....*Cinnamomum Cassia* Blume
Guzk (Kurd.).....*Juglans regia* L.

Habbat Halwah (Iraq).....*Peucedanum graveolens* Benth. & Hook.
Habb-dilmaluk (Ait.).....*Croton Tiglium* L.
Habb-el-khatai.....*Croton Tiglium* L.
Habb-el-nil (Ham.).....*Ipomoea hederacea* Jacq.
Habb-el-salatin (Ham.).....*Croton Tiglium* L.
Habb-i-balsān (Isf.).....*Commiphora opobalsamum* Kunth
Habbu'l ghār (Isf.).....*Pistacia Khinjuk* Stocks.
Habbu'l-ma'lab (Teh.).....*Prunus Mahaleb* L.
Hab-el-aas (Ar.).....*Myrtus communis* L.
Hab-el-a'ra'r (Ind. bazaars).....*Juniperus excelsa* Bieb.
Hab-el-balasana (Ar.).....*Commiphora opobalsamum* Kunth
Hab-el-zalim (Ar.).....*Hibiscus cannabinus* L.
Hab-es-souda (Ar., Egy., Iraq).....*Nigella sativa* Sibth.
Hab-safarjal.....*Pyrus Cydonia* L.
Habul-khazra (Teh.).....*Pistacia Khinjuk* Stocks.
Hab-ul-mahaliba (Ar.).....*Prunus Mahaleb* L.
Hab-us-sudan (Ar.).....*Cassia Absus* L.
Hajarat el dib (Ar.).....*Withania somnifera* Dunal
Hajaru'l-yahūd (Pers.).....*Cidaris* sp.
Hajr-el-armeni (Ar.).....Armenian Earth
Halawi (Iraq).....*Phoenix dactylifera* L.
Haldi (Hind.).....*Curcuma domestica* Val. and *C. longa* Trim.
Halīlah-i-kābulī (Teh., Isf.).....*Terminalia Chebula* Retz.
Halīlah-i-siyāh (Teh., Isf.).....*Terminalia Chebula* Retz.
Halīlah-i-zard (Teh., Isf.).....*Terminalia Chebula* Retz.
Halim (Hind.).....*Lepidium sativum* L.
Haliyūn (Teh.).....*Asparagus officinalis* L.
Halu zhgarh (Kurd.).....*Prunus domestica* L. var. *Juliana*
Hamam Komandji (Turk.).....*Malva sylvestris* L. var. *mauritiana* Boiss.
Hamīshah bahār (Teh., Iraq).....*Calendula officinalis* L.
Handhal (Kurd.).....*Citrullus Colocynthis* Schrad.
Hanzal (Ar.).....*Citrullus Colocynthis* Schrad.
Har (Hind.).....*Terminalia Chebula* Retz.
Hara (Hind.).....*Terminalia Chebula* Retz.
Harhār-kohī (Afg.).....*Juniperus excelsa* Bieb.
Haritaki (Beng.).....*Terminalia Chebula* Retz.
Haritala (Sans.).....Arsenic Trisulphide
Harmal (Ar., Iraq).....*Peganum Harmala* L.
Harmal rutbah (Ar., Iraq).....*Peganum Harmala* L.
Hartal (Hind.).....Arsenic Trisulphide
Hasach (Iraq).....*Tribulus terrestris* L.
Hasawi.....*Phoenix dactylifera* L.

Hastah-i-ālbālū (Teh.).....*Prunus Cerasus* L.
Hastah-i-nāranj (Teh.).....*Citrus sinensis* (L.) Osbeck
Hasta-i-zard ālū (Pers.).....*Prunus Armeniaca* L.
Havah-i-chūbah (Teh.).....*Onosma echioides* L.
Hawuch (Turk.).....*Daucus Carota* L.
Hebbel asle (Schl.).....*Tamarix pentandra* Pall.
Hebbul-beneh (Ar.).....*Pistacia Khinjuk* Stocks.
Helenion (Gr.).....*Inula Helenium* L.
Hermodactyl (Gr.).....*Colchicum luteum* Baker and *C. speciosum* Stev.
Hil (Ar.).....*Amomum subulatum* Roxb.
Hil (Iraq).....*Elettaria Cardamomum* Maton.
Hil-i-qurāb (Teh., Isf.).....*Amomum subulatum* Roxb.
Hinna (Iraq).....*Lawsonia alba* Lam.
Hinnāy-i-barg (Teh.).....*Lawsonia alba* Lam.
Hintah.....*Triticum* sp.
Hintah Khushnah.....*Triticum durum* Desf. (p. 182)
Hintah Qandahārī.....*Triticum vulgare* Vill.
Hintah walwal.....*Triticum* sp.
Hira dukhi (Hind.).....*Dracaena Cinnabari* Balf.
Hirda (Bom.).....*Terminalia Chebula* Retz.
Hishwarg (Bal.).....*Delphinium Zalil* Ait. & Hemsl.
Hsiang fu (Chin.).....*Cyperus rotundus* L.
Hulbah (Iraq).....*Trigonella Foenum-graecum* L.
Hurtāmūn (Iraq).....*Lathyrus sativus* L.

Idhrah baidha (Ar.).....*Sorghum vulgare* Pers.
Ighir iggur (Ar.).....*Acorus Calamus* L.
Ignatia Amara.....*Strychnos Ignatii* Berg.
Iklīl (Teh.).....*Astragalus hamosus* L.
Iklīl-ul-malik (Ar.).....*Astragalus hamosus* L.
Iklīl-ul-mulk (Bom.).....*Astragalus hamosus* L.
Ilachi (Hind.).....*Elettaria Cardamomum* Maton.
Imm-harmal.....*Punica Granatum* L.
'Inab (Iraq).....*Vitis vinifera* L.
Inab-ath-thalab (Teh.).....*Solanum nigrum* L.
Inab-ed-dib (Ar.).....*Solanum nigrum* L.
Indrajaou (Hind.).....*Holarrhena antidysenterica* Wall.
Indrazana (Hind.).....*Citrullus Colocynthis* Schrad.
Intubus (Lat.).....*Cichorium Intybus* L.
Irisha (Ind. bazaars).....*Iris spuria* Pall.
Isbaghol (Bal.).....*Plantago ciliata* Desf. (p. 155)
Isband (Bom.).....*Corchorus olitorius* L.
Isfedaj (Ar.).....Plumbi Carbonas
Isghand (Bal.).....*Zataria multiflora* Boiss.
Ish-hony.....*Gossypium peruvianum* (p. 123)
Ishkar (Ind. bazaars).....See *Cymbopogon Schoenanthus* Spreng.
Iskhir (Ar.).....*Cymbopogon Schoenanthus* Spreng.
Ispaghul (Pers.).....*Plantago ovata* Forsk.
Isparak (Teh.).....*Delphinium Zalil* Ait. & Hemsl.
Isparza (Yark.).....See Chahār-tukhmah
Isparzah (Teh.).....*Plantago ovata* Forsk.
IspināKh (Iraq).....*Spinacia oleracea* L.
Issikuttuz (Turk.).....*Salvia Hydrangea* DC.
Izgun (Bal.).....*Zataria multiflora* Boiss.
Izkhir-i-jami (Ar.).....*Vetiveria zizanioides* Stapf (also p. 111)

Ja (Chin.).....*Thea sinensis* L.
Ja'ad (Iraq).....*Teucrium Polium* L.
Jaephal (Hind.).....*Myristica fragrans* Houtt.
Ja'fari (Iraq).....*Tagetes erecta* L.
Jamalgota (Punj.).....*Croton Tiglium* L.
Jangali-haladi (Hind.).....*Curcuma aromatica* Salisb.
Jāv (Sind).....*Hordeum vulgare* L.
Jata-masi (Sans., Hind.).....*Nardostachys Jatamansi* DC.
Jatt (Ar.).....*Medicago sativa* L.
Jau (Iraq).....*Hordeum vulgare* L.
Jauz-i-būyā (Teh., Ar.).....*Myristica fragrans* Houtt.
Jav (Hind.).....*Hordeum vulgare* L.
Jawz-i-rumi (Afg.).....*Juglans regia* L.
Jayanti (Beng.).....*Sesbania aculeata* Poir.
Jazar (Iraq).....*Daucus Carota* L.
Jazr-ul-bostani (Ar.).....*Daucus Carota* L.
Jequirity (Tupi, Brazil).....*Abrus precatorius* L.
Jift (Teh.).....*Pistacia integerrima* Stew.
Jiljil (Iraq).....*Hibiscus cannabinus* L.
Jinjili (Hind.).....*Sesamum indicum* L.
Jira (Beng., Bom.).....*Cuminum Cyminum* L.
Jira-shak (N.E.Pers.).....*Carum Bulbocastanum* Koch
Jōshan Shīrāzī (Teh.).....*Thymus Serpyllum* L. var. *Kotschyanus* Boiss.
Jouj macel (Ar.).....*Datura Stramonium* L.
Jowar (Hind.).....*Sorghum vulgare* Pers.
Jōyi safīd (Iraq).....*Hordeum vulgare* L.
Jōyi siyāh (Iraq).....*Hordeum vulgare* L.
Joz (Turk.).....*Juglans regia* L.
Ju (Kurd.).....*Hordeum vulgare* L.
Juft (Teh.).....*Pistacia integerrima* Stew.
Juntiyana (Duk.).....*Gentiana lutea* L.
Jupha (Hind.).....*Hyssopus officinalis* L. var. *angustifolia* Boiss.
Jūtiyānā (Isf.).....*Gentiana lutea* L.

Kabābah-i-chīnī (Teh., Isf.).....*Piper Cubeba* L.
Kababah-i-dahan kushadeh (Pers.).*Zanthoxylum Rhetsa* DC.
Kabab-chini (Hind.).....*Piper Cubeba* L.
Kabar (Pers., Iraq).....*Capparis spinosa* L.
Kabiste talkh (Pers.).....*Citrullus Colocynthis* Schrad.
Kachola (Pers.).....See *Datura Stramonium* L.
Kachura (Hind.).....*Curcuma Zedoaria* Roxb. and *C. Zerumbet* Roxb.
Kadu (Hind.).....*Cucurbita Pepo* DC.
Kaf-i-daryā (Ar.).....*Sepia officinalis* L.
Kāfshah (Teh., Ham.).....*Carthamus tinctorius* L.
Kahkuti (Bal.).....*Zizyphora tenuior* L.
Kahu-khaskabija (Hind.).....*Lactuca sativa* L.
Kaik-vāsh (Isf.).....*Crataegus orientalis* Bieb.
Kakanj (Isf., Teh.).....*Physalis Alkekengi* L.
Kākil-i-zard (Teh.).....*Nannorrhops Ritchieana* Wendl.
Kākūtī (Teh.).....*Zizyphora tenuior* L.
Kaladanah (Hind.).....*Ipomoea hederacea* Jacq.
Kala Drakh (Ind.).....*Vitis vinifera* L.
Kala jira (Hind.).....*Nigella sativa* Sibth.
Kalamb-ki-jar (Hind.).....*Jateorhiza Columba* Miers
Kala-zirah (Afg.).....*Carum Bulbocastanum* Koch

Kalpah (Bom.).....*Cinnamomum Cassia* Blume
Kalpora (Bal.).....*Teucrium Stocksianum* Boiss. (p. 178)
Kamal (Ind.).....*Nymphaea* sp. (p. 144)
Kamela (Hind., Bom.).....*Mallotus philippinensis* Muell. Arg.
Kam-parah (Punj., Yark.).....See Chahār-tukhmah
Kandal (Afg.).....*Dorema Ammoniacum* Don
Kangar (Isf., Teh.).....*Cynara Scolymus* L.
Kangar-i-dahri (Isf., Teh.).....*Cynara Scolymus* L.
Kanim (Kurd.).....*Triticum vulgare* Vill.
Kanocha (Isf.).....*Salvia macrosiphon* Boiss.
Kansburaj (Ind. bazaars).....*Adiantum Capillus-Veneris* L.
Kapila (Mad.).....*Mallotus philippinensis* Muell. Arg.
Karafs (Iraq).....*Apium graveolens* L.
Karanaphal (Ar.).....*Eugenia aromatica* Baill.
Karasza (Hind.).....*Prunus Cerasus* L.
Karawyah (Iraq).....See *Peucedanum graveolens* Benth. & Hook.
Karaz (Ar.).....*Prunus Cerasus* L.
Karbasu (Achundow).....See *Roccella Montagnei* Bél.
Karchak (Ham.).....*Ricinus communis* L.
Karedemonah (Ham.).....*Conium maculatum* L.
Karezgi (Bal.).....*Solanum nigrum* L.
Karkooti.....Egyptian Earth, Sigillated Earth
Karkum (Pers.).....*Crocus sativus* L.
Karkum (Teh.).....*Curcuma domestica* Val. and *C. longa* Trim.
Karni Yarikh (Tab.).....*Plantago* sp.
Kār shūtur (Pers.).....*Alhagi camelorum* Fisch.
Karūt (Afg.).....*Bos indicus*
Karvaya-i-dashti (Pers.).....*Conium maculatum* L.
Kashburat (Teh.).....*Adiantum Capillus-Veneris* L.
Kashburat-el-bir (Pers.).....*Adiantum Capillus-Veneris* L.
Kashi (Hind., Bom., Beng.).....*Cichorium Intybus* L.
Kashi (Leh).....See *Saccharum officinarum* L.
Kashir (Bal.).....*Erysimum repandum* L.
Kashk Kashk (Kurd.).....*Bos indicus*
Kashus (Pers.).....*Cuscuta planifolia* Ten. and *C. hyalina* Roth
Kashūth (Ar.).....*Cuscuta planifolia* Ten. and *C. hyalina* Roth
Kasis (Pers.).....*Lepidium Iberis* L. (p. 171)
Kassutha (Gr.).....*Cuscuta planifolia* Ten. and *C. hyalina* Roth
Katan (Ait., Afg.).....*Linum usitatissimum* L.
Katek bah(?) (Teh.).....*Pyrethrum* sp.(?)
Kathīrā (Teh.).....*Astragalus gummifer* Labill.
Kāt-i-gulābī (Teh.).....*Uncaria Gambier* Roxb.
Katira gond (Hind.).....*Astragalus gummifer* Labill.
Kat karanj (Hind.).....*Caesalpinia Bonducella* Roxb.
Katun (Ait., Afg.).....*Linum usitatissimum* L.
Kavl-a-kūknār (Pers., Afg.).....*Papaver somniferum* L.
Kawich (Isf.).....*Crataegus orientalis* Bieb.
Keruwiah (Isf.).....*Chaerophyllum* sp.
Kesa.....*Quercus* sp.
Kesar (Kash.).....*Crocus sativus* L.
Kesara (Hind.).....*Crocus sativus* L.
Kesari (Hind.).....*Lathyrus sativus* L.
Keshus (Pers.).....*Cuscuta planifolia* Ten. and *C. hyalina* Roth
Khabazi (Ar.).....*Malva sylvestris* L. var. *mauritiana* Boiss.
Khadrawi (Iraq).....*Phoenix dactylifera* L.
Khakechi (Schl.).....*Erysimum repandum* L.

Khāk-i-mugl (Teh.).....*Commiphora Molmol* Engl.
Khākshīr (Teh.).....*Sisymbrium Sophia* L. (also p. 118)
Khākshīr-i-shīrīn (Teh.).....*Sisymbrium Sophia* L.
Khakshir-talkh (Isf.).....*Erysimum repandum* L.
Khaksi (Hind.).....*Sisymbrium Sophia* L.
Khalal.....*Phoenix dactylifera* L.
Khalal-i-nāranj (Teh.).....*Citrus sinensis* (L.) Osbeck
Khand (Leh).....See *Saccharum officinarum* L.
Kharbuz (Ind. bazaars).....See *Citrullus vulgaris* Schrad.
Kharbūzah-rūbāh (Pers.).....*Citrullus Colocynthis* Schrad.
Khardal.....*Brassica nigra* (L.) Koch
Khardal-i-shahrī (Teh., Ham.).....*Salvia* sp.
Khar-danick (Bal.).....*Plantago ovata* Forsk.
Khār-khasak (Teh.).....*Tribulus terrestris* L.
Khar mahra (Pers.).....*Cypraea moneta* L.
Kharnūbān (Isf.).....*Prosopis Stephaniana* Kunth
Khar-shnai (Kash.).....*Pistacia integerrima* Stew.
Khas Khas (Hind.).....*Vetiveria zizanioides* Stapf
Khasib.....*Phoenix dactylifera* L.
Khatmi.....See *Malva sylvestris* L. var. *mauritiana* Boiss.
Khatmolt (Bal.).....See Mummy
Khavi (Hind.).....*Cymbopogon Schoenanthus* Spreng.
Khaza-i-iblīs.....*Caesalpinia Bonducella* Roxb.
Khib-baze (Schl.).....*Malva sylvestris* L. var. *mauritiana* Boiss.
Khili-wili (Tab.).....*Lepidium Draba* L.
Khira (Punj.).....*Cucumis sativus* L.
Khitmi.....See *Malva sylvestris* L. var. *mauritiana* Boiss.
Khitmi-i-kuchak (Pers.).....*Malva sylvestris* L. var. *mauritiana* Boiss.
Khorasain-ajwan (Ind. bazaars).....*Conium maculatum* L.
Khove (Afg.).....*Nannorrhops Ritchieana* Wendl.
Khū (Afg.).....*Nannorrhops Ritchieana* Wendl.
Khubah (Ar.).....*Erysimum repandum* L.
Khūbani (Hind.).....*Prunus Armeniaca* L.
Khub-kalan (Hind.).....*Sisymbrium Sophia* L.
Khūlanjān (Teh.).....*Languas officinarum* Burkill
Khūn-i-siyāvash (Isf.).....*Dracaena Cinnabari* Balf.
Khurmā.....*Phoenix dactylifera* L.
Khushak (Ham.).....*Asparagus adscendens* Roxb.
Khushk-horāk (Afg.).....*Bos indicus*
Kinguere (Schl.).....*Cynara Scolymus* L.
Kira (Hind.).....*Cucumis sativus* L.
Kirmani (Isf.).....*Carum Bulbocastanum* Koch
Kisa.....*Quercus* sp.
Kīshah-i-kasni (Ham., Teh.).....*Cichorium Intybus* L.
Kisher Kundur.....*Boswellia Carterii* Bird.
Kish-kash (Ar.).....*Papaver somniferum* L.
Kishmish (Pers.).....*Vitis vinifera* L.
Kishmish-askari (Bagh.).....*Vitis vinifera* L.
Kishmish-i-dūgh (Bagh.).....*Vitis vinifera* L.
Kishmish-i-kūlī (Teh.).....*Loranthus Grewinkii* Boiss. & Bunge
Kishmish-i-sabzah (Bagh.).....*Vitis vinifera* L.
Kishmish-kawali (Ind. bazaars).....*Loranthus Grewinkii* Boiss. & Bunge
Kisht bar Kisht (Pers.).....*Helicteres Isora* L.
Kodu (Ind. bazaars).....See *Citrullus vulgaris* Schrad.

Kohi bang (Bal.).....*Hyoscyamus reticulatus* L.
Kohl Farsi (Pers.).....*Astragalus fasciculaefolius* Boiss.
Kohl Kirmani.....*Astragalus fasciculaefolius* Boiss.
Kondochi (Schl.).....*Veratrum album* L.
Koriyan (Gr.).....*Coriandrum sativum* L.
Kornub (Isf.).....*Prosopis Stephaniana* Kunth
Kors-i-kamar (Ait.).....*Entada gigas* (L.) Fawc. & Rendle
Koshataki (Sans.).....*Luffa acutangula* Roxb.
Krafas-al-bir (Iraq).....*Adiantum Capillus-Veneris* L.
Kriwarik (Turk.).....Agaric
Krūt (Afg.).....*Bos indicus*
Kuchila (Hind.).....*Strychnos Nux Vomica* L.
Kuchūlah (Teh.).....*Strychnos Nux Vomica* L.
Kūhān-i-shutur (Teh.).....*Camelus dromedarius* L.
Kuhl (Pers.).....Antimonium Sulphidum
Kukil-i-pol (Kash.).....*Cuscuta planifolia* Ten. and *C. hyalina* Roth
Kulambū (Teh.).....*Jateorhiza Columba* Miers
Kunbut (Syr.).....*Prosopis Stephaniana* Kunth
Kundij (Turk.).....*Sesamum indicum* L.
Kundur (Achundow).....*Gypsophila paniculata* L.
Kundur (Teh.).....*Boswellia Carterii* Bird.
Kundura unsa and zakara.....*Boswellia Carterii* Bird.
Kundusch (Achundow).....*Gypsophila paniculata* L.
Kundush (Ham., Teh.).....*Veratrum album* L.
Kunjad (Bom.).....*Astragalus fasciculaefolius* Boiss.
Kunjad (Kurd.).....*Sesamum indicum* L.
Kunjada (Ait.).....*Astragalus fasciculaefolius* Boiss.
Kunjidah-i-surkh u safīd (Teh.).....*Astragalus fasciculaefolius* Boiss.
Kurdumana (Hind.).....*Conium maculatum* L.
Kurk amla (Turk.).....*Phyllanthus Emblica* L.
Kurwa (Ar., Iraq).....*Ricinus communis* L.
Kusam (Hind.).....*Carthamus tinctorius* L.
Kusa misri (Leh).....See *Saccharum officinarum* L.
Kust (Ham.).....*Saussurea Lappa* C. B. Clarke
Kutha Kushta patchuk (Hind.).....*Saussurea Lappa* C. B. Clarke
Kuzbara (Ar., Iraq).....*Coriandrum sativum* L.

Lachyat-as-sheikh.....See *Lecanora esculenta* Eversm.
Lakh (Bom.).....*Lathyrus sativus* L.
Lāla (Afg.).....*Tulipa montana* Lindl.
Lal-chandan (Hind.).....*Pterocarpus santalinus* L.
Lal mirch (Hind.).....*Capsicum frutescens* L.
Lang (Guz.).....*Lathyrus sativus* L.
Lapis jadaicus (Ph. Pers.).....*Cidaris* sp.
Lār (Kash.).....*Cucumis sativus* L.
Lāsurkh (Teh., Isf.).....Cupri oxidum
Laung (Hind.).....*Eugenia aromatica* Baill.
Leeka (Iraq).....*Rhodymenia* sp.
Lehsan (Hind.).....*Allium sativum* L.
Lek-poshte (Schl.).....*Testudo horsfieldii* Grey and *T. graeca*
Lesan ul Lamal (Ar.).....*Plantago ovata* Forsk.
Liane vermifuge (Fr.).....*Quisqualis indica* L.
Lihayat as-shāyib (Bagh.).....*Roccella Montagnei* Bél.
Lihayat as-shāyib (Iraq).....*Cladophora* sp. (p. 165)
Lihur.....*Phoenix dactylifera* L.
Limmon Basra (Iraq).....*Citrus aurantifolia* (Christm.) Swingle

Limon (Iraq).....*Citrus aurantifolia* (Christm.) Swingle
Limon-amman (Iraq).....*Citrus aurantifolia* (Christm.) Swingle
Livās (Pers., Ar.).....*Rheum Ribes* L.
Lizan ul usafir (Achundow).....*Holarrhena antidysenterica* Wall.
Lubia (Iraq).....*Vigna Catjang* Walp.
Lubia (Teh.).....*Phaseolus vulgaris* L.
Lubia-kermiz (Teh.).....*Phaseolus vulgaris* L.
Lūbiyā-gul (Teh.).....*Dolichos Lablab* L.
Lukah (Kurd.).....*Gossypium* sp. (p. 123)
Lyka (Iraq).....*Rhodymenia* sp.

Mab-ul-dan (Ar.).....*Melia Azedarach* L.
Maghdunes (Iraq).....*Carum Petroselinum* Benth. & Hook.
Maglah.....*Matricaria* sp.
Mahizahraj (Ar.).....*Verbascum Thapsus* L.
Māhriz (Kash.).....See *Lecanora esculenta* Eversm.
Maiphala (Hind.).....*Quercus infectoria* Olivier
Majandri (Bal.).....*Sesbania aculeata* Poir.
Mak (Bal.).....*Vigna Catjang* Walp.
Māmīrān (Teh.).....*Coptis Teeta* Wall.
Māmīz (Teh.).....*Capra* sp.
Māmīz-i-kirī (Teh.).....*Capra* sp.
Manjit (Hind.).....*Rubia Cordifolia* L. and *R. tinctorium*
Mānsarīl (Kash.).....*Polygonum amplexicaule* Don (p. 156)
Mārchūbah (Ham.).....*Asparagus adscendens* Roxb.
Mardan gusht.....*Stachys lavandulaefolia* Vahl
Marg-i-māhī (Teh.).....*Anamirta paniculata* Coleb.
Marjanjūsh (Achundow).....*Origanum Majorana* L. (p. 174)
Mārmūt (Ait.).....*Boucerosca Aucheri*(?) (p. 135)
Marorphali (Hind.).....*Helicteres Isora* L.
Marv (Isf.).....*Salvia macrosiphon* Boiss.
Marva (Yark.).....See Chahār-tukhmah
Maryam nukhūdī (Teh.).....*Teucrium Polium* L.
Marzanjūsh (Tab.).....*Stachys lavandulaefolia* Vahl
Marzanpīsh (Teh.).....*Zataria multiflora* Boiss.
Māsh (Iraq, Pers.).....*Phaseolus radiatus* L.
Masha (Sans.).....*Phaseolus radiatus* L.
Mashana churro (Bal.).....Mummy
Mash-i-maha (Afg.).....*Phaseolus radiatus* L.
Masūr (Hind.).....*Lens esculenta* Moench
Maur (Bal.).....*Salvia aegyptica* L. (p. 169)
Māyah-i-barrah (Isf.).....*Ovis* sp.
Māzaryūn (Teh.).....*Verbascum Thapsus* L.
Māzū (Isf.).....*Quercus infectoria* Olivier
Meriam Nekhodi (Teh.).....*Teucrium scordioides* Schreb. (p. 177)
Mētahk (Iraq).....*Juglans regia* L.
Methi (Hind., Bom.).....*Trigonella Foenum-graecum* L.
Mishi.....*Phoenix dactylifera* L.
Mishk-i-taramashia (Ind. bazaars)..*Zizyphora tenuior* L.
Mishmish (Iraq).....*Prunus Armeniaca* L.
Misri (Egy.).....See *Saccharum officinarum* L.
Mīvah-i-zabān-i-gunjishk (Pers.)...*Holarrhena antidysenterica* Wall.
Moghl-ezregh (Schl.).....*Commiphora Mukul* Engl.
Moma (Hind.).....*Hymenoptera, Apoidea*

Moohar-khas (Ind. bazaars).....*Adiantum Capillus-Veneris* L.
Motha (Hind.).....*Cyperus rotundus* L.
Muchchah (Isf.).....*Lepidium Draba* L.
Mughat (Egy.).....*Glossostemon Bruguieri* Desf.
Mugrila (Hind.).....*Nigella sativa* Sibth.
Mukhlisah.....*Matricaria* sp.
Mukul, See muql
Mula (Hind.).....*Raphanus sativus* L.
Mulukhiyah (Iraq).....*Corchorus olitorius* L.
Mūm (Teh.).....*Hymenoptera, Apoidea*
Mūm-i-kāfūri.....*Hymenoptera, Apoidea*
Mūmiyā (Pers.).....Mummy
Mūmiyaī (Pers.).....Mummy
Munakha (Pers.).....*Vitis vinifera* L.
Mun-e-makki (Teh.).....*Commiphora Molmol* Engl.
Muql (Ar.).....See *Commiphora Mukul* Engl.
Muql-i-abair (Teh.).....*Commiphora Mukul* Engl.
Muql-i-azrāq (Teh.).....*Commiphora Mukul* Engl.
Muql-i-yahud (Teh.).....*Commiphora Mukul* Engl.
Mur (Hind., Bom.).....*Commiphora Molmol* Engl.
Murda sang (Teh.).....Plumbi Oxidum
Murdā sang-i-nugra'i (Teh.).....Plumbi Oxidum
Murdā sang-i-tilā'ī (Teh.).....Plumbi Oxidum
Murd-i-sabz.....*Myrtus communis* L.
Muro (Hind.).....*Raphanus sativus* L.
Musabbar (Ar.).....*Aloe Perryi* Baker
Muschk-i-zemin.....*Cyperus rotundus* L.
Myrrha mechensis (Ph. Pers.).....*Commiphora Molmol* Engl.

Nafal (Iraq).....*Trifolium repens* L.
Nafil (Iraq).....*Trifolium repens* L.
Nakhl.....*Phoenix dactylifera* L.
Nakhūd (Teh., Punj., Turk.).....*Cicer arietinum* L.
Namak (Teh.).....Sodium carbonate
Naphae flores (Schl.).....*Citrus sinensis* (L.) Osbeck
Nar (Turk.).....*Punica Granatum* L.
Nasābīdah-i-kirmani (Teh.).....*Indigofera tinctoria* L.
Nashwar (Pers.).....*Nicotiana* sp.
Nenuphar (Ph. Pers.).....*Nymphaea alba* L.
Nīl (Hind.).....*Indigofera tinctoria* L.
Nil-kanthe (Punj.).....*Chrozophora verbascifolia* Juss.
Nīlūfar.....See *Nymphaea alba* L.
Nīlūfar-i-kirmānashāhī (Teh.).....*Nymphaea alba* L.
Nishāstah (Teh.).....*Triticum vulgare* Vill.
Nisik (Kurd. in Iraq).....*Lens esculenta* Moench
Nok (Kurd.).....*Cicer arietinum* L.
Normush (Ham.).....*Ochrocarpus longifolius* Benth. & Hook.
Nukhūd-i-alvand (Teh., Isf.).....*Aristolochia rotunda* L.
Nukhund-i-alavandi (Ar.).....*Aristolochia rotunda* L.
Numi Basra.....*Citrus aurantifolia* (Christm.) Swingle
Nūr-mūs (Ham.).....*Ochrocarpus longifolius* Benth. & Hook.

Omum (Tam.).....*Carum copticum* Benth. & Hook.
Orisa (Afg.).....*Iris spuria* Pall.
Osteocolla (Lat.).....Mummy
Osthoukhodouce (Schl.).....*Lavandula dentata* L.

Pachman-i-puh (Teh.).....*Helicteres Isora* L.
Pādzahr (Pers.).....*Capra aegagrus* Gmel.
Paglah (Kurd.).....*Vicia Faba* L.
Paiwand-e-maryam (Pers.).....*Prunus Mahaleb* L.
Pāla-mangy (Kash.).....See *Lecanora esculenta* Eversm.
Palas Keby (Hind.).....*Butea frondosa* Roxb.
Palaspapado (Duk.).....*Butea frondosa* Roxb.
Palsan (Hind.).....*Hibiscus cannabinus* L.
Pambu (Kurd.).....*Gossypium* sp. (p. 123)
Pambuq (Turk.).....*Gossypium* sp. (p. 123)
Panirak.....See *Malva sylvestris* L. var. *mauritiana* Boiss.
Panir māyeh.....*Ovis* sp.
Papal (Pers.).....*Areca Catechu* L.
Papita (Ar., Hind., Bom.).....*Strychnos Ignatii* Berg.
Pāptiyāl (Teh.).....*Strychnos Ignatii* Berg.
Parakeh-i-hindī (Teh.).....*Butea frondosa* Roxb.
Parr-i-siyāvash.....*Adiantum Capillus-Veneris* L.
Pat (Beng.).....*Bombyx fortunatus* Hutton
Patchak (Beng.).....*Saussurea Lappa* C. B. Clarke
Pathar-ka-ber (Hind.).....*Cidaris* sp.
Pating (Afg.).....*Prunus Armeniaca* L.
Pechak (Hind.).....*Helicteres Isora* L.
Peganon (Scripture).....*Ruta graveolens* L.
Penirek (Schl.).....*Malva sylvestris* L. var. *mauritiana* Boiss.
Phataki (Hind.).....Alum
Phitkari (Hind.).....Alum
Piaz (Kurd.).....*Allium Cepa* L.
Pīlah abrīsham (Teh.).....*Bombyx fortunatus* Hutton
Pileh.....*Bombyx fortunatus* Hutton
Pil gush.....*Inula Helenium* L.
Pinang (Mal.).....*Areca Catechu* L.
Pīrīnj (Turk.).....*Oryza sativa* L.
Pistah (Teh.).....*Pistacia vera* L.
Pitar saleri (Hind.).....*Carum Petroselinum* Benth. & Hook.
Pōst-a-kūknār (Pers., Afg.).....*Papaver somniferum* L.
Post-i-limon (Afg.).....*Citrus aurantifolia* (Christm.) Swingle
Post-i-nāranj.....*Citrus sinensis* (L.) Osbeck
Prabala (Sans.).....*Corallium rubrum* Lam.
Psylli semina (Ph. Pers.).....*Plantago ovata* Forsk.
Pudina (Hind., Pers.).....*Mentha sylvestris* L.
Pūnah (Teh.).....*Mentha sylvestris* L.
Pune (Teh.).....*Quercus Vallonea* Kotschy
Punir-mayeh-shutur (Pers.).....*Camelus dromedarius* L.
Punjah-i-salaba.....*Orchis latifolia* L.
Pūst-i-kinah-kinah (Teh.).....*Cinchona Calisaya* Wedd.
Pust-i-pistah (Teh.).....*Pistacia vera* L.
Pust-i-utruj (Teh.).....*Citrus sinensis* (L.) Osbeck

Qalyāb (Teh.).....Sodium Carbonate
Qamr-ad-din.....*Prunus Armeniaca* L.
Qanaqinah (Iraq).....*Cinchona Calisaya* Wedd.
Qantaryūn (Teh.).....*Equisetum ramosissimum* Desf.
Qarah Koz (Turk.).....*Calendula officinalis* L.
Qaranful (Iraq).....*Eugenia aromatica* Baill.
Qaranful-asward (Iraq).....*Eugenia aromatica* Baill.
Qārch (Teh.).....Agaric

Qar-i-qurūt (Teh.).....*Bos indicus*
Qarpuz (Turk.).....*Citrullus vulgaris* Schrad.
Qatera (Hind.).....*Astragalus gummifer* Labill.
Qatt (Ar.).....*Medicago sativa* L.
Qodumah (Ar.).....*Alyssum campestre* L.
Qunah baqan (Turk.).....*Helianthus annuus* L.
Qunbalilah (Teh.).....*Mallotus philippinensis* Muell. Arg.
Qunnab.....*Hibiscus cannabinus* L. (p. 125)
Qurdumānā (Teh.).....*Chaerophyllum* sp.
Qurs-i-kamar (Teh.).....*Entada gigas* (L.) Fawc. & Rendle
Qurtum (Ar.).....*Carthamus tinctorius* L.
Qurunbād (Teh.).....*Curcuma aromatica* Salisb.
Qurūt (Teh.).....*Bos indicus*
Qust-i-talkh (Teh.).....*Saussurea Lappa* C. B. Clarke
Qutn (Ar.).....*Gossypium* sp.
Qutn Amerikani.....*Gossypium hirsutum* L. (p. 122)
Qutn Iraqi.....*Gossypium herbaceum* L. (p. 122)
Qutn Misri.....*Gossypium* sp. (p. 123)

Rad. Junci odorati (Ph. Pers.).....*Cyperus rotundus* L.
Rahishi (Ar.).....*Sesamum indicum* L.
Raihan (Ar.).....*Ocimum Basilicum* L.
Raihan (Yark.).....See Chahār-tukhmah
Raiz de China (Port.).....*Smilax China* L. and *S. glabra* Roxb.
Rajajira (Bom.).....*Corchorus olitorius* L.
Rakta Chandana (Sans.).....*Pterocarpus santalinus* L.
Rangan-ki-bel (Hind.).....*Quisqualis indica* L.
Rangh (Ar., Hind.).....*Lawsonia alba* Lam.
Rang-i-kirmānī (Teh.).....*Indigofera tinctoria* L.
Rang-i-sābīdah (Teh.).....*Indigofera tinctoria* L.
Rang-i-vasmah (Teh.).....*Indigofera tinctoria* L.
Rang-mehndi (Hind.).....*Lawsonia alba* Lam.
Ranj-i-badshah.....*Onosma* sp.
Rasan.....*Inula Helenium* L.
Rashi (Bagh.).....*Sesamum indicum* L.
Ra's-i-hindi (Teh.).....*Inula Helenium* L.
Rasin (Hind.).....*Sesbania aculeata* Poir.
Rasna (Hind.).....*Inula Helenium* L.
Ratanjali (Guz.).....*Pterocarpus santalinus* L.
Ratanjot (Hind.).....*Onosma echioides* L.
Rati (Hind.).....*Abrus precatorius* L.
Rātiyanah (Teh.).....*Pterocarpus santalinus* L.
Razmah (Kash.).....*Phaseolus vulgaris* L.
Resha-i-kishvar (Ham., Isf., Teh.)..*Cuscuta planifolia* Ten. and *C. hyalina* Roth
Resham.....*Bombyx fortunatus* Hutton
Resham-ki-keri (Duk.).....*Bombyx fortunatus* Hutton
Reyhane Kouhi (Schl.).....*Ocimum canum* Sims
Risha Baba Adam (Schl.).....*Arctium Lappa* L.
Rīshah havah-i-chūbah (Ham.).....*Onosma echioides* L.
Rīshah-i-anār (Teh.).....*Punica Granatum* L.
Rīshah-i-anjabār (Teh.).....*Polygonum Bistorta* L.
Rīshah-i-arīsa (Teh.).....*Iris spuria* Pall.
Rīshah-i-asl-i-sūs (Teh.).....*Glycyrrhiza glabra* L.
Rīshah-i-bābā-Adam (Teh.).....*Arctium Lappa* L.
Rīshah-i-kabar (Teh.).....*Capparis spinosa* L.
Rīshah-i-kalafs (Teh.).....*Ferula Sumbul* Hook. f.

Rīshah-i-khatmī (Ham.).....*Althaea lavateraefolia* DC.
Rīshah-i-rāziyānah (Teh.).....*Foeniculum vulgare* Mill.
Rīshah-shāh-tūt (Teh.).....*Morus nigra* L.
Rīshah tamesh (Teh.).....*Plumbago rosea* L.
Rish-shar (Teh.).....*Ferula galbaniflua* Boiss.
Rīvand-i-chinī (Isf., Teh.).....*Rheum palmatum* L.
Riwas (Punj.).....*Rheum Ribes* L.
Roghan-i-khash khāsh.....*Papaver somniferum* L.
Roghan-i-zagher (Ait., Afg.).....*Linum usitatissimum* L.
Rojia (Port.).....*Tagetes erecta* L.
Rounace (Schl.).....*Rubia Cordifolia* L. and *R. tinctorium* L.
Rubb-i-sūs.....*Glycyrrhiza glabra* L.
Rughan-i-char-i-chesak.....See *Tribulus terrestris* L.
Ruhan (Kurd.).....*Ocimum Basilicum* L.
Rūnās (Teh., Isf.).....*Rubia Cordifolia* L. and *R. tinctorium* L.
Rūniyās (Teh., Isf.).....*Rubia Cordifolia* L. and *R. tinctorium* L.
Rutab.....*Phoenix dactylifera* L.
Ruzz (Ar.).....*Oryza sativa* L.

Sa'ad (Iraq).....*Cyperus rotundus* L.
Sa'atar (Ind. bazaars).....*Zataria multiflora* Boiss.
Sabr-i-zard (Teh.).....*Aloe Perryi* Baker
Sadaf (Ar.).....*Cypraea moneta* L.
Sādhaj-i-hindī (Isf.).....*Cinnamomum Cassia* Blume
Safīd āb-i-shaikh (Teh.).....Plumbi Carbonas
Sag-anjar.....*Solanum Dulcamara* L. (p. 172)
Sages (Staff.).....*Pistacia Terebinthus* L.
Sagiz-i-safīd (Teh.).....*Pistacia Terebinthus* L.
Sag Palak (Hind.).....*Spinacia oleracea* L.
Sa'ir.....*Phoenix dactylifera* L.
Saisaban (Egy.).....*Sesbania aculeata* Poir.
Sajji mati.....Sodium Carbonate
Saka-binaja (Ar.).....*Ferula persica* Willd.
Sakbīnaj (Teh.).....*Ferula persica* Willd.
Sakulali (Teh.).....*Commiphora Mukul* Engl.
Sa'lab (Teh.).....*Orchis latifolia* L.
Salab-misri (Ar.).....*Orchis latifolia* L.
Samagh Hamama (Hind.).....*Dorema Ammoniacum* Don
Samgh Arabi (Ar., Pers.).....*Acacia Senegal* Willd.
Samgh-i-arzhan (Teh.).....*Acacia Senegal* Willd.
Samgh nadh (Punj.).....*Nummulites* sp.
Samudraphena (Sans.).....*Sepia officinalis* L.
Sanā (Teh.).....*Cassia acutifolia* Delile
Sana-hindi (Ar.).....*Cassia acutifolia* Delile
Sana-mukhi (Iraq).....*Cassia acutifolia* Delile
Sandal-i-safīd (Teh.).....*Santalum album* L.
Sandal-i-surkh (Teh.).....*Pterocarpus santalinus* L.
Sandalūs (Ind. bazaars).....*Trachylobium Hornemannianum* Hayne
Sang-i-marjan (Hind.).....*Corallium rubrum* Lam.
Sang-i-sar-i-māhī (Ind.).....*Percomorphi, Sciaendae*
Sang-i-shadnaj (Afg.).....*Nummulites* sp.
Sang-i-yahuda (Pers.).....*Cidaris* sp.
Sanjirahut (Sans.).....Calcium Sulphate
Sansaq (Ar.).....*Stachys lavandulaefolia* Vahl
Saosafid (Ait.).....*Gypsophila paniculata* L.
Sapistan (Pers.).....*Cordia Myxa* L.

Sarcocolla (Gr.).....*Astragalus fasciculaefolius* Boiss.
Sarish.....*Eremurus Aucherianus* Boiss.
Sarsand (Bal.).....*Salvia Hydrangea* DC.
Sarsun (Hind.).....*Brassica campestris* L. var. *Napus* Bab.
Sarwali (Hind.).....*Celosia argentea* L.
Satanj (Punj.).....*Nummulites* sp.
Satari (Hind.).....*Ruta graveolens* L.
Satarmul (Hind.).....*Asparagus adscendens* Roxb.
Satavar (Hind.).....*Asparagus adscendens* Roxb.
Sawa (Hind.).....*Peucedanum graveolens* Benth. & Hook. (p. 148)
Sebestan (Pers.).....*Cordia Myxa* L.
Seetere (Schl.).....*Thymus Serpyllum* L. var. *Kotschyanus* Boiss.
Seid (Sud.).....*Cyperus rotundus* L.
Sek binedge (Schl.).....*Ferula persica* Willd.
Sekran (Syr.).....*Withania Somnifera* Dunal
Semen Bardanae (English Herbal 1730).....*Arctium Lappa* L.
Semen Basilici (Old Herbals).....*Ocimum Basilicum* L.
Sem. Cichorii (Ph. Pers.).....*Cichorium Intybus* L.
Sepistān (Teh.).....*Cordia Myxa* L.
Sesbaniyah (Iraq).....*Sesbania aculeata* Poir.
Seta Kundura (Hind.).....*Boswellia Carterii* Bird.
Shabbit (Ar.).....*Peucedanum graveolens* Benth. & Hook. (p. 148)
Shāf-i-mamītā (Teh.).....Clyster
Shaftal (Punj., Bal.).....*Trifolium repens* L.
Shagāgī (Teh.).....*Trachydium Lehmanni* Benth.
Shāhdānej-i-'adasī (Teh.).....*Nummulites* sp.
Shahdeve (Hind.).....*Chrozophora verbascifolia* Juss.
Shahi (Leh).....See *Saccharum officinarum* L.
Shahna (Bal.).....*Pistacia vera* L.
Shahtarrah (Pers.).....*Fumaria parviflora* Lam.
Shāh-tūt (Pers.).....*Morus nigra* L.
Sha'ir.....*Hordeum* sp.
Sha'īr Abū Sikkatain (Ar.).....*Hordeum* sp.
Sha'īr Abū Sūwaif (Ar.).....*Hordeum* sp.
Sha'irah.....*Hordeum* sp.
Sha'īr Sparqalān (Ar.).....*Hordeum* sp.
Shakakula micari (Hind.).....*Asparagus adscendens* Roxb.
Shakar (Pers.).....*Saccharum officinarum* L.
Shakar-i-surkh (Teh.).....*Saccharum officinarum* L.
Shakar tīqāl (Teh.).....*Echinops persicus* Stev.
Shākhah-i-marjān (Teh.).....*Corallium rubrum* Lam.
Shakr-ul-ashar (Pers.).....*Cotoneaster nummularia* Fisch. & Mey.
Shambalīlah (Teh.).....*Trigonella Foenum-graecum* L.
Shami (Iraq).....*Citrullus vulgaris* Schrad.
Shams-wa-qamar (Iraq).....*Helianthus annuus* L.
Shar-al-anat (Iraq).....*Adiantum Capillus-Veneris* L.
Shātarrah (Teh., Isf.).....*Fumaria parviflora* Lam.
Sha'ur.....*Hordeum* sp.
Sheb (Bagh., Iraq).....Alum
Shekakul (Teh.).....*Trachydium Lehmanni* Benth.
Shijar (Iraq).....*Cucurbita Pepo* DC.
Shilib (Turk.).....*Oryza sativa* L.
Shinah Azqhi (Bal.).....*Datura Stramonium* L.
Shingir gaz.....*Tamarix pentandra* Pall.
Shirias.....*Eremurus Aucherianus* Boiss.

Shir Kalan (Teh.)..... *Acanthophyllum squamosum* Boiss.
Shīr Khisht (Teh.)..... *Cotoneaster nummularia* Fisch. & Mey.
Shir-milk (Pers.)..... *Cotoneaster nummularia* Fisch. & Mey.
Shīr-zād (Teh.)..... *Lecanora esculenta* Eversm.
Shītaraj (Teh.)..... *Plumbago rosea* L.
Shivit (Isf.)..... *Peucedanum graveolens* Benth. & Hook.
Shok (Ar.)..... *Prosopis Stephaniana* Kunth
Shorah (Hind.)..... Potassium Nitrate
Shudnuj udsee (Ar.)..... *Nummulites* sp.
Shūrah-i-qalam (Teh.)..... Potassium Nitrate
Shuwairib..... *Hordeum* sp.
Shuwandar sukari (Iraq)..... *Beta vulgaris* L.
Siah gaz..... *Tamarix articulata* Vahl (p. 176)
Sibar (Ar.)..... *Aloe Perryi* Baker
Silaigah (Iraq)..... *Beta vulgaris* L.
Silaijah (Iraq)..... *Beta vulgaris* L.
Silajatu (Sans.)..... Mummy
Silajit (Hind.)..... Mummy
Siliq (Turk.)..... *Beta vulgaris* L.
Sim (Hind.)..... *Dolichos Lablab* L.
Simbi (Sans.)..... *Dolichos Lablab* L.
Simsim (Iraq)..... *Sesamum indicum* L.
Sindur (Bom.)..... Plumbi Oxidum
Sinjad-i-talkh (Teh., Isf.)..... *Melia Azedarach* L.
Sinn-aj-jamal..... *Triticum* sp.
Sinn-al-fīl..... *Triticum* sp.
Sipand (Teh.)..... *Peganum Harmala* L.
Sipi (Hind.)..... *Cypraea moneta* L.
Sir (Teh., Iraq)..... *Allium sativum* L.
Siris..... *Eremurus Aucherianus* Boiss.
Sirish-i-narm..... *Eremurus Aucherianus* Boiss.
Sirīsh-i-safīd (Isf., Teh.)..... *Eremurus Aucherianus* Boiss.
Siyāh-danan (Teh.)..... *Nigella sativa* Sibth.
Siyāh-tukhmah (Teh.)..... *Nigella sativa* Sibth.
So-ad (Ham.)..... *Cyperus rotundus* L.
Som (Ar.)..... *Allium sativum* L.
Soo'juch (Kurd.) ..... *Vitis vinifera* L.
Sopari (Hind.)..... *Areca Catechu* L.
Soyah (Hind.)..... *Peucedanum graveolens* Benth. & Hook.
Spati-kari (Sans.)..... Alum
Spistha (Afg.)..... *Medicago sativa* L.
Stigu (Afg.)..... *Prunus Armeniaca* L.
Subz-i-gulanj (Teh.)..... *Pistacia Khinjuk* Stocks.
Sudāb (Teh.)..... *Ruta graveolens* L.
Sudaba (Ar.)..... *Ruta graveolens* L.
Sufeda (Hind.)..... Plumbi Carbonas
Sufed musli (Bom.)..... *Asparagus adscendens* Roxb.
Sufid pathar (Hind.)..... Calcium Sulphate
Sukhur..... *Pistacia Trebinthus* L.
Sumbul (Teh.)..... *Ferula Sumbul* Hook. f.
Sumbul-i-latīf (Teh., Isf.)..... *Nardostachys Jatamansi* DC.
Sumbul-jibali (Ar.)..... *Nardostachys Jatamansi* DC.
Sumbulu'l-tib (Teh., Isf.)..... *Nardostachys Jatamansi* DC.
Sumgh alucha (Pers.)..... See *Prunus Cerasus* L.
Summāq (Teh.)..... *Rhus coriaria* L.

Summāq-i-shakki bī hastah (Teh.)..*Rhus coriaria* L.
Surinjan.....See *Merendera persica* Boiss.
Surinjān-i-kirmānī (Teh.).....*Colchicum luteum* Baker and *C. speciosum* Stev.
Surinjan-i-shirin (Ind. bazaars)....See *Merendera persica* Boiss.
Sūrinjān-i-sufrah shudah (Teh.)....*Merendera persica* Boiss.
Surinjān-i-talkh (Pers.).....*Colchicum luteum* Baker and *C. speciosum* Stev.
Sur-kūk (Afg.).....*Testudo horsfieldii* Grey and *T. graeca*
Surmah (Pers.).....Antimonium Sulphidum
Surma-ka-pathar (Hind.).....Antimonium Sulphidum

Tabashir (Ind. bazaars).....*Bambusa arundinacea* L.
Tabashira (Ar.).....*Bambusa arundinacea* L.
Tabāshīr-i-qalamī (Teh.).....*Bambusa arundinacea* L.
Tāj-i-khurūs (Teh.).....*Amaranthus paniculatus* L.
Tāj-i-rīzī (Teh.).....*Solanum nigrum* L.
Takmeria (Bom.).....*Ocimum Basilicum* L.
Talispatra (Hind.).....*Taxus baccata* L.
Talkak (?) (Iraq).....*Quercus lusitanica* Lam. var. *tauricola*
Tambaku (Afg.).....*Nicotiana Tabacum* L. and *N. rustica* L.
Tambrā nagkeshur (Pers.).....*Ochrocarpus longifolius* Benth. & Hook.
Tamr.....*Phoenix dactylifera* L.
Tannum (Ar.).....*Chrozophora verbascifolia* Juss.
Tāpālaq (Teh.).....*Cyperus rotundus* L.
Tar-anjubin (Pers.).....*Alhagi camelorum* Fisch. (also p. 162)
Tara tezak (Afg.).....*Lepidium sativum* L.
Tarbuz (Teh.).....*Citrullus vulgaris* Schrad.
Tarrah (Pers.).....*Fumaria parviflora* Lam.
Tartak (Hind.).....*Rhus coriaria* L.
Tavi misri (Leh).....See *Saccharum officinarum* L.
Tawak (Kurd.).....*Celtis Tournefortii* Lam. (p. 97)
Terengamisk(?) (Teh.).....*Calamintha graveolens* Benth.
Thebba (Iraq).....See *Nicotiana Tabacum* L. and *N. rustica* L.
Thum (Turk.).....*Allium sativum* L.
Til (Hind.).....*Sesamum indicum* L.
Timan (Iraq).....*Oryza sativa* L.
Tin.....*Ficus Carica* L.
Tirsh (Kurd.).....*Rhus coriaria* L.
Tochme Kertchec (Schl.).....*Ricinus communis* L.
Towdri (Hind.).....*Sisymbrium Sophia* L.
Tribolia (modern Gr.).....*Tribulus terrestris* L.
Triorit (Sans.).....*Ipomoea Turpethum* R. Br.
Triputa (Sans.).....*Ipomoea Turpethum* R. Br.
Tuber Chinae.....*Smilax China* L. and *S. glabra* Roxb.
Tu fu ling (Chin.).....*Smilax China* L. and *S. glabra* Roxb.
Tukhm-chirbati (Schl.).....*Ocimum canum* Sims
Tukhm-i-anjurah (Teh.).....*Salvia macrosiphon* Boiss.
Tukhm-i-bābūnāh (Teh.).....*Matricaria Chamomilla* L.
Tukhm-i-bādanjān (Teh.).....*Solanum xanthocarpum* Schr. & Wend. and *S. Melongena* L.
Tukhm-i-bārhang (Ham.).....*Plantago major* L.
Tukhm-i-bazrak (Ham.).....*Linum usitatissimum* L.
Tukhm-i-bihdānah (Teh.).....*Pyrus Cydonia* L.
Tukhm-i-chuqundur (Teh.).....*Beta vulgaris* L.
Tukhm-i-garmak (Teh.).....*Citrullus vulgaris* Schrad.
Tukhm-i-gishnīz (Teh.).....*Coriandrum sativum* L.

Tukhm-i-havīj (Teh.).....*Daucus Carota* L.
Tukhm-i-hummāz (Teh., Ham.)....*Rumex conglomeratus* L. and *R. obtusifolius* L.
Tukhm-i-iblīs (Teh.).....*Caesalpinia Bonducella* Roxb.
Tukhm-i-isfand (Teh.).....*Peganum Harmala* L.
Tukhm-i-ispanāj (Teh.).....*Spinacia oleracea* L.
Tukhm-i-jinjak (Ait.).....*Prosopis Stephaniana* Kunth
Tukhm-i-kadu (Teh.).....*Cucurbita Pepo* DC.
Tukhm-i-kadū qalyānī (Teh.).....*Lagenaria vulgaris* Ser.
Tukhm-i-kāfshah (Teh., Ham.).....*Carthamus tinctorius* L.
Tukhm-i-kāhū (Teh.).....*Lactuca sativa* L.
Tukhm-i-kalam (Teh.).....*Carum Petroselinum* Benth. & Hook.
Tukhm-i-karafs (Teh.).....*Apium graveolens* L.
Tukhm-i-kāsnī (Ham., Teh.).....*Cichorium Intybus* L.
Tukhm-i-katan (Ait.).....*Linum usitatissimum* L.
Tukhm-i-keshus (Pers.).....*Cuscuta planifolia* Ten. and *C. hyalina* Roth
Tukhm-i-khābāzi (Teh.).....*Malva sylvestris* L. var. *mauritiana* Boiss.
Tukhm-i-khāk-i-shīr (Ham.).....*Erysimum repandum* L.
Tukhm-i-khākshīr talkh.....*Erysimum* sp. (p. 171)
Tukhm-i-khardal (Teh., Ham.).....*Salvia* sp.
Tukhm-i-khash khāsh.....*Papaver somniferum* L.
Tukhm-i-khatmī (Isf.).....*Althaea* sp.
Tukhm-i-khatmī.....*Althaea lavateraefolia* DC.
Tukhm-i-khiyār (Teh.).....*Cucumis sativus* L.
Tukhm-i-kishavar (Ham., Isf., Teh.).....*Cuscuta planifolia* Ten. and *C. hyalina* Roth
Tukhm-i-kushūth (Ham., Isf., Teh.).....*Cuscuta planifolia* Ten. and *C. hyalina* Roth
Tukhm-i-lāk-pusht (Teh.).....*Testudo horsfieldii* Grey and *T. graeca*
Tukhm-i-lāl'abbās (Teh.).....*Mirabilis Jalapa* L.
Tukhm-i-livās (Ham., Teh.).....*Rheum Ribes* L.
Tukhm-i-marv (Teh.).....*Salvia macrosiphon* Boiss.
Tukhm-i-mūrd (Teh.).....*Myrtus communis* L.
Tukhm-i-nil.....*Ipomoea hederacea* Jacq.
Tukhm-i-nīlūfar (Teh.).....*Ipomoea hederacea* Jacq.
Tukhm-i-piyāz (Teh.).....*Allium Cepa* L.
Tukhm-i-raihān (Ham., Teh.).....*Ocimum Basilicum* L.
Tukhm-i-rāziyānah (Teh., Ham.)...*Foeniculum vulgare* Mill.
Tukhm-i-shabdar (Teh.).....*Trifolium repens* L.
Tukhm-i-shaga'ig (Ham.).....*Papaver somniferum* L.
Tukhm-i-shāhī (Teh.).....*Lepidium sativum* L.
Tukhm-i-shalgham (Teh.) .....*Brassica campestris* L. var. *Napus* Bab.
Tukhm-i-shambalīlah (Teh., Ham.).*Trigonella Foenum-graecum* L.
Tukhm-i-sharbatī (Ham., Teh.)....*Ocimum canum* Sims
Tukhm-i-shātarrah (Ham.).....*Fumaria parviflora* Lam.
Tukhm-i-shivīd (Teh.).....*Peucedanum graveolens* Benth. & Hook.
Tukhm-i-siyāh (Teh.).....*Nigella sativa* Sibth.
Tukhm-i-tamr (Teh.).....*Tamarindus indica* L.
Tukhm-i-tarrah (Teh.).....*Allium sativum* L.
Tukhm-i-turi (Afg.).....*Luffa acutangula* Roxb.
Tukhm-i-turubchah (Teh.).....*Raphanus sativus* L.
Tukhm-makhtum (Punj.).....Sigillated Earth
Tukhm-tāj-i-khurūs (Isf.).....*Amaranthus paniculatus* L.
Tukhm tartizak (Isf.).....*Lepidium sativum* L.
Tukhm-tātūrā (Pers.).....*Datura Stramonium* L.
Tukhm-zabān-i-gunjishk-i-talkh (Pers.).....*Holarrhena antidysenterica* Wall.

Tukhm zardak (Teh.).....*Daucus Carota* L.
Tukhm zīreh (Teh.).....*Carum Bulbocastanum* Koch
Tuklejah(?) (Ham.).....*Stachys germanica* L.
Tumaku.....*Nicotiana Tabacum* L. and *N. rustica* L.
Tur (Kurd.).....*Raphanus sativus* L.
Turb (Pers.).....*Raphanus sativus* L.
Turbad (Leh).....*Ipomoea Turpethum* R. Br.
Turbud (Teh.).....*Ipomoea Turpethum* R. Br.
Tūrī (Teh.).....*Luffa acutangula* Roxb.
Tut-i-dham (Pers.).....*Morus nigra* L.
Tūt-i-kushk (Teh.).....*Morus nigra* L.
Tūtūn (Iraq).....*Nicotiana Tabacum* L. and *N. rustica* L.

Udasaliyun (Gr.).....*Apium graveolens* L.
'Ud-i-balsān (Isf.).....*Commiphora opobalsamum* Kunth
'Unnāb (Iraq).....*Zizyphus vulgaris* L.
'Unnāb (Teh.).....*Zizyphus vulgaris* L.
Urd (Ind.).....*Phaseolus radiatus* L.
Urid (Ind.).....*Phaseolus radiatus* L.
Uruk-el-kafur (Ar.).....*Curcuma Zedoaria* Roxb. and *C. Zerumbet* Roxb.
Ushna ushek (Pers.).....*Dorema Ammoniacum* Don
Ustūkhūdūs (Teh.).....*Lavandula dentata* L.
Uurd (Abu Mansur).....*Myrtus communis* L.
Uzarih (Turk.).....*Peganum Harmala* L.

Vālik (Teh.).....*Allium Akaka* Gmel.
Vashā (Teh.).....*Dorema Ammoniacum* Don
Vetiver (Tam.).....*Vetiveria zizanioides* Stapf
Vrishanasana (Sans.).....*Embelia Ribes* Burm.

Warch (Punj.).....*Acorus Calamus* L.
Ward (Ar.).....*Rosa damascena* Mill.
Ward (Ar.).....*Rosa hemisphaerica* Herm.
Ward-ash-shams (Iraq).....*Helianthus annuus* L.
Wasma (Punj., Pers., Turkey).....*Indigofera tinctoria* L.
Welec, See Valik
Weleque, See Valik
Winjah (Kurd.).....*Medicago sativa* L.
Wodak (Bal.).....*Tulipa montana* Lindl.
Wuda (Ar.).....*Cypraea moneta* L.

Yunjah (Kurd.).....*Medicago sativa* L.

Za'adi.....*Phoenix dactylifera* L.
Za'farān (Teh.).....*Crocus sativus* L.
Zaeteran (Boiss.).....*Thymus* sp.
Zafran (Ar.).....*Crocus sativus* L.
Zagher (Ait., Afg.).....*Linum usitatissimum* L.
Zahar (Iraq).....*Anamirta paniculata* Coleb.
Zaitūn.....*Olea europea* L.
Zāj-u-safīd (Teh.).....Alum
Zalil (Iran).....*Delphinium Zalil* Ait. & Hemsl.
Zamchi (Turk.).....Alum
Zanjabil chami.....*Inula Helenium* L.
Zanjabil-i-shami.....*Inula Helenium* L.
Zaravand-i-gird (Pers.).....*Aristolochia rotunda* L.

Zarāvand-i-tavīl (Ham., Teh.).....*Aristolochia longa* L.
Zard ālū (Pers.).....*Prunus Armeniaca* L.
Zard chobah (Pers.).....*Curcuma domestica* Val. and *C. longa* Trim.
Zarishk (Hind., Bom.).....*Berberis vulgaris* L.
Zarnab (Isf., Ar.).....*Taxus baccata* L.
Zārnickh-i-dandan (Teh.).....Arsenic Trisulphide
Zarnīkh (Teh.).....Arsenic Trisulphide
Zārnikh-zard (Isf.).....Arsenic Trisulphide
Zatar (Syr., Iraq).....*Thymus Serpyllum* L. var. *Kotschyanus* Boiss.
Zatar (Teh.).....*Zataria multiflora* Boiss. (also pp. 174, 178)
Zatar farisi (Boiss.).....*Thymus* sp.
Ziniyān (Teh., Ham.).....*Carum copticum* Benth. & Hook.
Zira (Hind.).....*Cuminum Cyminum* L.
Zīrah-i-sabz (Isf., Iraq).....*Cuminum Cyminum* L.
Zireh-siyah (Isf.).....*Carum Bulbocastanum* Koch
Zirishk (Bagh.).....*Berberis vulgaris* L.
Zirishk-i-guli (Ham., Teh.).....*Berberis vulgaris* L.
Zirishk-tursh (Punj.).....*Berberis vulgaris* L.
Ziwan (Iraq).....*Lolium rigidum* Gaud.
Zūfā (Teh.).....*Nepeta micrantha* Bunge and *N. ispahanica* Boiss.
Zufah-i-yabis (Ar.).....*Nepeta micrantha* Bunge and *N. ispahanica* Boiss.
Zuleh (Ham.).....*Gypsophila paniculata* L.
Zūnā (Teh.).....*Nepeta micrantha* Bunge and *N. ispahanica* Boiss.
Zunghari.....*Pistacia Terebinthus* L.
Zupha-e-yabis (Ar.).....*Hyssopus officinalis* L. var. *angustifolia* Boiss.
Zuratspi (Kurd.).....*Sorghum vulgare* Pers.
Zurraij (Iraq).....*Chrozophora verbascifolia* Juss.
Zurunbād (Teh.).....*Curcuma Zedoaria* Roxb. and *C. Zerumbet* Roxb.

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